

People's Republic of China  
Intellectual Property Finance  
Chongqing No.1 Intermediate People's Court

Civil Judgment

(2024) Yu 01 Min Chu No. 905

Plaintiff: ZTE Corporation, with its registered address in the People's Republic of China, [REDACTED]

[REDACTED], Unified Social Credit Code 9144030027939873X7.

Legal representative: Xu Ziyang, executive director and president.

Representing attorney: Ni Zhenhua, lawyer at King & Wood Mallesons, Beijing.

Legal representative: Xu Jing, lawyer at King & Wood Mallesons, Beijing.

Plaintiff: ZTE Corporation Chongqing Branch, located in Zhonghua City, [REDACTED]

[REDACTED] Unified Social Credit Code 91500000MA60P97F6A.

Person in charge: Liu Deqing, General Manager.

Legal representative: Mao Jin, lawyer at King & Wood Mallesons, Beijing.

Legal representative: Wang Haobo, lawyer at King & Wood Mallesons.

Defendant: Samsung Electronics Co., Ltd. (三星电子), Address

129, [REDACTED]

Legal Representative: Han Jong-hee (韩宗熙), Representative Director, Vice President and Chief Executive Officer



Executive Officer.

Legal representative: Xie Guo [REDACTED] at Beijing [REDACTED] Firm.

Legal representative: Dong Fa [REDACTED] at Beijing [REDACTED] w Firm.

Defendant: Samsung (China) Investment Co., Ltd., located in the People's [REDACTED]

[REDACTED] Unified Social Credit Code 91110000625911349W.

Legal representative: Li Dacheng, Chairman and Manager.

Legal representative: Xie Guo [REDACTED] at Beijing [REDACTED] Firm.

Legal representative: Shao Yu [REDACTED] at Beijing L [REDACTED] rm.

Defendant: Samsung (China) Investment Co., Ltd. Chongqing Branch, located at...

Social credit code 91500103588019924T.

Person in charge: Kang June Goo.

Legal representative: Xie Guo [REDACTED] at Beijing [REDACTED] Firm.

Legal representative: Liu Xin, [REDACTED] Beijing Lif [REDACTED] m.

Plaintiffs ZTE Corporation (hereinafter referred to as ZTE) and ZTE

ZTE Chongqing Branch, Inc. (hereinafter referred to as ZTE Chongqing Branch)

Together with the defendants Samsung Electronics Corporation (hereinafter referred to as Samsung Electronics) and Samsung (China)

Samsung Investment Co., Ltd. (hereinafter referred to as Samsung China) and Samsung (China) Investment Co., Ltd.

Samsung Chongqing Branch (hereinafter referred to as Samsung Chongqing) Standard Essential Patent Licensing Dispute

In this case, after the court accepted the case on December 23, 2024, the three defendants filed a lawsuit with the court.

An objection to jurisdiction was raised because Samsung Electronics filed the objection beyond the statutory time limit.

During the defense, this court, in accordance with the law, will not process Samsung Electronics' jurisdictional objection application, and

The ruling rejected the jurisdictional objections of Samsung China and Samsung Chongqing.

Xing Chongqing disagreed with the ruling and filed an appeal, which was rejected by the Supreme People's Court in accordance with the law.

The appeal was dismissed, the original ruling was upheld, and the case resumed hearings. This case involves ZTE Corporation and...

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Samsung Electronics has filed four patent infringement lawsuits against each other [case numbers are (2025) Yu 01 Min].

Cases No. 538, 539, 540, and 541 are related and, with the consent of both parties,

This court has decided to consolidate this case with the other four cases for trial. This court will apply the relevant laws in this case.

The case was heard in closed session at the request of the parties involved. The plaintiff was ZTE.

The litigation agents representing the telecommunications company are Xu Jing and Ni Zhenhua, and the representatives of ZTE Chongqing Branch are...

The legal representatives are Mao Jin and Wang Haobo, and the defendants are Samsung Electronics, Samsung China, and Samsung...

Xie Guanbin, the joint litigation agent for Xing Chongqing, and the litigation agent [redacted] San Dian Xingzi.

Agent Dong Fa [redacted] China's authorized litigation agent Shao Yuqi, and Samsung Heavy [redacted]

Qing's legal representative, Liu Xin, appeared in [redacted] participate in the proceedings. The case has now concluded.

Knot.

The plaintiffs are ZTE Corporation and ZTE Chongqing Branch (hereinafter collectively referred to as "ZTE Company").

The plaintiff and defendant hereby file the following claims: 1. Regarding the property owned and licensed by the plaintiff and defendant...

The necessary patents for the wireless communication standard were agreed upon by both parties, and the implementation of the wireless communication standard was determined.

All products comply with the principles of fairness, reasonableness, and non-discrimination ("FRAND").

1. Cross-licensing terms within the sphere of influence, including but not limited to licensing fees; 2. Request

The court ruled that the defendant shall bear the litigation costs of this case.

During the court hearing, the plaintiff clarified its first claim as follows: 1. Xu

Standards and licensed patents are available. Licensed standards include 5G, 4G, 3G, and 2G standards.

The patents are essential patents for 2G-5G wireless communication standards, excluding 6G standards and 6G.

Standard essential patents. 2. License term. The license term is 5 years, i.e., until 2025.

From January 1, 2020 to December 31, 2029. 3. Licensed products. That is, products compliant with 2G, 3G,

4G and 5G standards [but excluding next-generation standards after 5G (such as any 6G)]

Any and all mobile devices and infrastructure equipment (standards). 4. Both parties are based on

The aforementioned licensing terms are subject to global cross-licensing, and the defendant shall pay the plaintiff a one-time payment.

Intellectual Property Finance

\$731 million, covering the period from January 1, 2024 to December 2029.

The 2G-5G cross-licensing fee on the 31st, from January 1, 2019 to December 2023.

The 5G cross-licensing fee on the 31st.

Facts and Reasons: The plaintiff, ZTE Corporation, was founded in 1985 and is a global company.

Telecommunications equipment manufacturers have established global R&D centers in China, the United States, Sweden, and other locations.

Through years of accumulation, ZTE has selected and cultivated a team of highly skilled and proficient engineers.

A team of experts who are familiar with international standardization rules and active in international standardization activities.

ZTE Corporation is a key international standards organization (3GPP) that defines 5G technology standards.

The employee was elected Chairman of RAN3 and Vice Chairman of CT4, and served as the chief reporter for multiple technical standards.

In other words, ZTE Corporation actively participated in the formulation and promotion of wireless communication standards.

Over the years, billions of dollars have been invested in research and development in the field of communication standardization, resulting in significant progress in wireless communication standards.

It plays a crucial role in the standard-setting process and possesses a large number of standard-essential patents. Currently, wireless...

Communication standards have been widely adopted as industry and enterprise standards in China, providing a basis for various...

It is used by major telecom operators and communications equipment manufacturers. ZTE Chongqing Branch is...

ZTE's branch office in Chongqing engages in information technology consulting and assistance.

ZTE Corporation is conducting research and development and implementation work related to communication standards in Chongqing and other locations.

do.

The defendant, Samsung Electronics, is a company incorporated and legally existing in South Korea.

Founded in 1969, the company is a global leader in consumer electronics and electronic components.

Manufacturer, and one of the world's largest information technology companies, in smartphones,

Samsung holds a leading position in the memory semiconductor and television markets. Samsung China was established in 1996.

Established in 2008, it is a wholly-owned subsidiary of Samsung Electronics in mainland China, with a business scope including...

Including the sale of electronic products, communication equipment, mobile terminal equipment, and wearable devices.

Samsung Chongqing is involved in the sales, technical services, and technology development of smart devices.

## Intellectual Property Finance

Established in 2011, it is a branch of Samsung China in Chongqing, primarily engaged in business services.

It assists Samsung China in carrying out related business activities in Chongqing, including business operations.

Samsung China and Samsung Chongqing serve as Samsung Electronics' production bases in mainland China.

The main business entity actively promotes the operation of "Samsung" brand products in China.

Event. Samsung China is a distributor of "Samsung" brand smartphones and smart tablets.

Telecommunications equipment network access license for the business operation of products such as tablets and smartwatches.

The applicant is responsible for operating Samsung's Chinese website and providing information on some of its product models.

Consumers can purchase smartphones directly through the Samsung Chinese website via the provided purchase link.

Smart tablets, smartwatches, and other smart terminal products. (According to Samsung's Chinese website...)

Information displayed and searchable on the website of the Ministry of Industry and Information Technology shows these "Samsung" brands.

Smartphones and tablets all comply with relevant wireless communication standards.

ZTE and Samsung Electronics are the main holders of standard essential patents.

All of them have submitted FRAND (Front-End Patent Applications) to organizations such as ETSI regarding their standard essential patents.

The licensing statement shall be appropriately agreed upon in licensing negotiations with any implementer.

FRAND obligations. The plaintiff and defendant began fulfilling their respective obligations to each other in April 2023.

Licensing negotiations regarding the standard essential patents failed to reach an agreement. Therefore, the matter was referred to the court.

The court filed a lawsuit.

The defendants are Samsung Electronics, Samsung China, and Samsung Chongqing (collectively referred to as "Samsung").

The company responded by saying:

First, the plaintiff's claims in this case are unclear and lack factual basis.

It should be rejected.

The plaintiff argues that the licensing fees for 2025-2029 should be based on the actual value of the licensed products.

Revenue generated after actual sales, but future product sales have not yet actually occurred.

The plaintiff's corresponding claims lack factual basis. Furthermore, regarding the relationship between the two parties in this case...

Intellectual Property Finance

The parties involved in the use of third-party data, future sales forecasting methods, and the permission for forecasting.

There are significant disputes regarding product sales figures, and the court cannot rule on future permits.

The terms of the license fee. Even if the court rules on future license fees, the plaintiff's claim...

The request is also unclear.

Second, Samsung's counter-offer during negotiations complied with FRAND principles.

When the most comparable protocol and other highly comparable protocols exist.

In the following circumstances, the comparable agreement method should be given priority as the method for calculating rates. This case involves...

In disputes over the renewal of agreements, comparable agreement law has an overwhelming advantage in its applicability.

The Patent Licensing, Statute of Limitations Interruption and Patent Silence Agreement signed by the parties in 2021

(hereinafter referred to as the "2021 Agreement") is the most comparable licensing agreement in this case and should be based on

This agreement is subject to the consideration of the disputed agreement between the parties in this case (hereinafter referred to as the "2024 Agreement").

The total net license fee under this agreement, if the court determines that it is based solely on the 2021 Agreement.

If the 5G patent licensing fees under the 2024 Agreement cannot be calculated, then it can be broken down.

ZTE Corporation and Apple Inc. (hereinafter referred to as Apple) signed a "Global Patent Licensing Agreement"

The "2024 Agreement" (hereinafter referred to as the "ZTE-Apple 2020 Agreement") is used to derive the "2024 Agreement".

The total net license fee under the annual agreement. This is extremely similar to that of Datang Mobile.

Datang Telecom Equipment Co., Ltd. (hereinafter referred to as Datang) and Samsung Electronics signed the "Agreement on Cooperation and Cooperation between Datang Telecom Equipment Co., Ltd."

The Samsung Electronics Datang Agreement (hereinafter referred to as the "Samsung Datang Agreement") was signed and derived.

The value of ZTE's patents under the 2024 Agreement can confirm Samsung's...

Given during negotiations [REDACTED] the quote complies with FRAND principles. Based on a three-part breakdown...

Star Electronics signed agreements with Huawei Technologies Co., Ltd. (hereinafter referred to as Huawei) and other companies.

Patent Licensing and Assignment Agreement (hereinafter referred to as the "Samsung Electronics Huawei Agreement")

The derived total net license fee under the 2024 Agreement proves that currently...

Samsung, in good faith to resolve the dispute, offered further terms during the negotiations.

Intellectual Property Finance

[REDACTED] The pricing proposal also complies with FRAND principles.

Third, ZTE's claims regarding the calculation of licensing fees are all incorrect and should not be...

Supported

ZTE's economics experts used a top-down approach in their economics report.

The calculation method may be based on a combination of a top-down approach and the so-called "comparable agreement method".

Mixed calculations are performed. However, the top-down approach has inherent flaws, and this case also has...

Given clearly comparable agreements, a top-down approach is not appropriate; therefore, ZTE's corresponding calculations...

The algorithm contains a fundamental flaw. Regarding comparable protocols, in this case, when a suitable...

In the case of comparable agreements, Samsung Electronics, as the implementer, and Ericsson and Nokia

The patent licensing agreement signed between Samsung Electronics and Interactive Digital (hereinafter referred to as the "Samsung Electronics License Agreement")

Ericsson Agreement, Samsung Electronics Nokia Agreement, Samsung Electronics Interoperable Digital Protocol

The three agreements do not reflect the value of ZTE's patent portfolio.

The agreement was reached in the context of arbitration or litigation, and Samsung Electronics has been the subject of numerous lawsuits.

Patent groups facing pressure and threats of injunctions, whose licensing rates fail to reflect free market value.

License fees. Therefore, the aforementioned three agreements are not comparable in this case. Additionally...

In addition, ZTE's economics experts also had some shortcomings in the specific protocol breakdown calculations.

There are many errors, so the "implicit industry cumulative fee rate" calculated from this is naturally also unreliable.

Reference value.

In conclusion, Samsung believes that ZTE's claim for licensing fees in this case is complete.

Samsung's licensing fee renegotiation completely violates FRAND principles. [REDACTED] as well as

As a compromise [REDACTED] in accordance with FRAND principles, the license fee amount in this case and

The licensing terms should be determined according to their claims.

The parties presented their claims and defenses (details of the evidence presented by both parties are available in the attached list).

(See attachment) Evidence was submitted in accordance with the law, and this court organized an exchange of evidence between the parties.

## Intellectual Property Finance

Examination of Evidence. Evidence to which the parties have no objection is hereby confirmed by this court and included in the case file.

Regarding evidence that is disputed by the parties, this court will conduct a comprehensive review based on all the facts of the case.

Based on the statements of the parties and the evidence reviewed and verified, this court finds the facts...

The actual situation is as follows:

### I. Basic Information of Both Parties

ZTE Corporation, founded in 1985, is a global telecommunications equipment manufacturer.

ZTE has established global R&D centers in China, the United States, Sweden, and other locations. ZTE Chongqing Branch

The company is a branch of ZTE Corporation in Chongqing, engaged in information technology consulting and...

Assisting ZTE in conducting research and development related to communication standards in Chongqing and other regions.

To carry out the work.

Samsung Electronics, founded in 1969, is a global leader in consumer electronics and...

Electronic component manufacturer, and one of the world's largest information technology companies, in the field of smart...

Samsung holds a leading position in the markets for smartphones, memory semiconductors, and televisions. (Samsung China)

It is a wholly-owned subsidiary of Samsung Electronics in mainland China, primarily operating in China.

Business operations. Samsung Chongqing is a branch of Samsung China established in Chongqing, primarily engaged in...

Engaged in business services and other business operations, assisting Samsung China in carrying out related activities in Chongqing.

Business activities.

ZTE and Samsung Electronics have both actively participated in the development of wireless communication standards.

Both in terms of development and promotion, they possess a large number of standard-essential patents, making them essential patent holders for wireless communication standards.

The major patent holders have all filed with the European Telecommunications Standards Institute (hereinafter referred to as the European Telecommunications Standards Institute).

Organizations such as ETSI have a fair and reasonable obligation to license standard-essential patents.

A commitment to the obligation of non-discrimination (FRAND).

ZTE Corporation and Samsung Electronics signed the "2021 Agreement" on July 9, 2021.

According to the agreement, each party grants the other a non-standard essential patent for its respective relevant standard.

Intellectual Property Finance

An exclusive license, valid from January 1, 2021 to December 31, 2023.

Stop today.

## II. Relevant Facts Regarding the Licensing Negotiations for the 2024 Agreement

Before the expiration of the 2021 Agreement, the two parties reached an agreement on the 2024 Agreement.

At [REDACTED] Formal negotiations and consultations commenced. The two sides agreed to discuss...

The program includes technical discussions, business discussions, and agreement discussions. During the technical discussion phase,

The two sides discussed via email [REDACTED] engage in technical discussions and proceed

Three technical meetings were held. Afterwards, both parties decided to proceed with business negotiations.

During this period, both parties discussed licensing terms and fees via email and business meetings.

The negotiations involved multiple rounds of bidding and counter-bidding, with ZTE submitting five bids.

Samsung Electronics offered five cross-licensing offers and three single-licensing offers.

Cross-licensing counter-offer. The details of the negotiations related to the dispute are summarized below:

[REDACTED] The two sides held their first business meeting, with ZTE Corporation...

ZTE presented its first cross-licensing offer at the meeting.

(Price). Among them, licensed products are [REDACTED] May

Patentable [REDACTED] The scope of the license is as follows [REDACTED] License period is as follows.

Limited to [REDACTED] License Model

The formula is [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] During the meeting, ZTE adopted [REDACTED]

[REDACTED] Please provide an explanation, and we hope that Samsung Electronics will... [REDACTED] forward

Provide a counter-offer.

Intellectual Property Finance

[REDACTED] The two sides held their second business meeting, Samsung Electronics

The meeting responded to ZTE's offer, and on [REDACTED]

[REDACTED] The conference presentation materials were sent, including: (1) Samsung Electronics believes that ZTE Corporation

of [REDACTED] Problems exist, including [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (2) Samsung Electronics believes [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] At the same time, Samsung Electronics proposed a delivery...

Cross-License Counter-Offer ("Samsung Electronics First Cross-License Counter-Offer"): Licensed Products

Product [REDACTED] The licensed patent is [REDACTED]

[REDACTED] The license period is [REDACTED]

[REDACTED] The payment model is [REDACTED]

[REDACTED]

[REDACTED] The two sides held their third business meeting. ZTE Corporation

At the meeting, they responded to Samsung Electronics' counter-offer and, [REDACTED]

[REDACTED] The conference presentation materials were sent: (1) ZTE Corporation believes that [REDACTED] yes

A reasonable method for determining licensing fees has been supported by several prior cases; (2)

Samsung Electronics' first counter-offer did not comply with FRAND principles. [REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance

[REDACTED] Meanwhile, ZTE Corporation has submitted an updated cross-licensing offer ("ZTE Corporation").

(Second Cross-License Offer): Licensed Products are [REDACTED]

[REDACTED] The licensed patent is [REDACTED]

[REDACTED] The scope of the license is as follows [REDACTED] the license period is as follows. [REDACTED]

[REDACTED] The paid model is [REDACTED]

[REDACTED]

[REDACTED] In addition, both sides also

At once [REDACTED] They exchanged views, including [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The two sides held their fourth business meeting. Samsung Electronics

The meeting responded to ZTE's second cross-licensing offer, and [REDACTED]

[REDACTED] Conference presentation materials were sent. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Meanwhile, Samsung Electronics proposed an updated cross-border strategy.

License Counter-Offer ("Samsung Electronics Second Cross-License Counter-Offer"): Licensed Products

for [REDACTED] the licensed patent is [REDACTED]

[REDACTED] The license period is [REDACTED]

[REDACTED] The payment model is [REDACTED]

Intellectual Property Finance

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] The two sides held their fifth business meeting. (ZTE Corporation)

During the meeting, they responded to Samsung Electronics' second cross-licensing counteroffer, and

The following conference presentation materials were sent out on the same day: (1) ZTE Corporation insisted on its [REDACTED]

[REDACTED] The quote, based on [REDACTED] The quoted price complies with FRAND principles;

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (5) Samsung Electronics' counter-offer does not comply with FRAND

This approach clearly underestimates the value of ZTE's patents.

[REDACTED] The two sides held their sixth business meeting, but neither side agreed to [an agreement].

Submit new offers and counteroffers.

[REDACTED] The two sides held their seventh business meeting. (ZTE Corporation)

ZTE presented an updated cross-licensing offer at the meeting ("ZTE's Third Cross-License Offer").

"Licensed offer", and on [REDACTED] conference presentation materials were sent:

Licensed products are [REDACTED]

[REDACTED] The licensed patent is [REDACTED] The scope of the license is

[REDACTED] The license period is [REDACTED]

[REDACTED] The paid model is [REDACTED]

[REDACTED]

[REDACTED] Furthermore, ZTE stated that it referenced Samsung Electronics.

Intellectual Property Finance

The agreement reached between the company and Interactive Digital cross-validated the reasonableness of ZTE's offer.

Sex. Samsung Electronics stated. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

At the same time, Samsung Electronics presented an updated cross-licensing counteroffer at the meeting.

("Samsung Electronics' Third Cross-License Counter-Offer"), and on [REDACTED]

[REDACTED] Conference presentation materials were sent: Licensed product is [REDACTED]

[REDACTED] The licensed patent is [REDACTED] License period

Between [REDACTED]

[REDACTED] The payment model is [REDACTED]

[REDACTED] The counter-offer can be broken down as follows: Samsung Electronics should pay ZTE...

[REDACTED] The estimated total cost of communication payment is [REDACTED] ZTE should provide Samsung Electronics with [information/resources].

The estimated total cost of the sub-payment is [REDACTED]

[REDACTED]

Both parties [REDACTED] the eighth round of business negotiations was held, but neither side achieved a consensus.

Submit new offers and counteroffers.

[REDACTED] ZTE provided Samsung Electronics with [REDACTED]

Intellectual Property Finance

[REDACTED] ZTE's first one-way licensing offer for its patent portfolio. [REDACTED]

[REDACTED] Meanwhile, ZTE Corporation clearly stated [REDACTED]

[REDACTED] The offer for ZTE's third cross-licensing remains valid.

Both parties respectively [REDACTED]

[REDACTED] Three business negotiations were held, but neither side put forward a new offer or counter-offer.

price.

[REDACTED] Star Electronics sent an email to ZTE Corporation, providing...

Samsung Electronics' actual global sales figures.

[REDACTED] ZTE sent an email to Samsung Electronics providing information.

Based on Xingtong's global actual sales data, and further based on the actual sales data of both parties...

The new quotation calculation process is as follows: (1) Calculated based on actual sales data

The price was significantly higher than the calculations ZTE had previously obtained using third-party data.

However, ZTE is still willing to maintain... [REDACTED] The proposed quote, i.e.

[REDACTED] (2) Regarding other terms of the cross-licensing agreement, ZTE Corporation

The report suggests that both parties should first focus on the issue of FRAND licensing fees, rather than the other aspects of the agreement.

His terms.

[REDACTED] ZTE sent an email to Samsung Electronics, based on

The actual sales data updated ZTE's... [REDACTED] the middle of the issued

ZTE's second one-way license offer for its patent package.

This quote uses [REDACTED] Amount and [REDACTED] Cross-licensing report

The portion payable by Samsung Electronics in the price is the same as the portion payable by ZTE (excluding the portion that ZTE should have paid to Samsung).

(Fees for electronic payments).

[REDACTED] Samsung Electronics sent an email to ZTE, stating:

Intellectual Property Finance

ZTE Corporation [REDACTED] The price has remained unchanged for eight months, based on ZTE's [REDACTED]

[REDACTED] The calculated quote has fundamental flaws, and ZTE has not addressed them.

Samsung Electronics adjusted its pricing based on actual sales data. Meanwhile, Samsung Electronics also...

Xingtong provided an updated counter-offer ("Samsung Electronics Fourth Cross-License Counter-offer").

Price): Licensed products are [REDACTED], license

The patent is [REDACTED] The license period is [REDACTED]

[REDACTED] The payment model is

[REDACTED] at the same time,

Samsung Electronics of [REDACTED] corresponding price on top of the cross-licensing offer.

The ZTE patent package one-way license price in this cross-licensing offer is [REDACTED]

In addition, Samsung Electronics also provided ZTE with updated actual sales figures and

Shipment data, including data for the first quarter of 2025.

[REDACTED] Samsung Electronics provides ZTE with updated countermeasures.

The offer ("Samsung Electronics Fifth Cross-License Counteroffer"): The licensed products are [REDACTED]

[REDACTED] The licensed patent is [REDACTED]

[REDACTED] The license period is [REDACTED]

[REDACTED] The payment model is [REDACTED] Samsung

Electronic payment to ZTE Corporation [REDACTED] Meanwhile, Samsung Electronics stated that... [REDACTED]

[REDACTED] It will be guaranteed by three bank guarantees.

[REDACTED] ZTE sent an email to Samsung Electronics inquiring about...

Ask Samsung Electronics [REDACTED] Can the bank guarantee be withdrawn immediately?

And this will be an unconditional and non-refundable payment from Samsung Electronics, representing Samsung's...

Electronics based on ZTE Corporation [REDACTED] Quotation and Samsung Electronics [REDACTED]

[REDACTED] A counter-offer, representing a portion of the licensing fee payable for all the patents to be licensed.

## Intellectual Property Finance

Undisputed portion.

[REDACTED] ZTE sent an email to Samsung Electronics to further...

Step provided an updated offer: (1) Cross-licensing: to Samsung Electronics up to

[REDACTED] Cross-licensing, corresponding [REDACTED]

[REDACTED] ("ZTE's Fourth Cross-License Offer"); (2)

One-way license: corresponding to [REDACTED] "middle

(Xingtong's third one-way license offer).

[REDACTED] ZTE sent an email to Samsung Electronics, stating that...

The cross-licensing period requested by Samsung Electronics expires. [REDACTED] Towards

Samsung Electronics provided up to [REDACTED] The cross-licensing offer is [REDACTED]

[REDACTED] Furthermore, it was clarified that Samsung Electronics could accept any of the following proposals.

(ZTE's Fifth Cross-License Offer): License period until... [REDACTED]

[REDACTED]; or the license period is until [REDACTED]

[REDACTED]

### III. Basic Information on Related Litigation and Other Disputes Between the Parties

#### (a) Global litigation status of both parties

According to the evidence on file, on December 19, 2024, Samsung Electronics filed a lawsuit with the UK...

The Supreme Court of the United States filed a lawsuit against ZTE Corporation and its affiliates, and since then, the two parties have been in a state of emergency.

Multiple lawsuits have been filed in several jurisdictions worldwide. As of the conclusion of this trial, both parties...

Fang filed lawsuits in the UK, China, Brazil, the US, Germany, and the European Uniform Patent Court.

Multiple lawsuits have been filed.

The lawsuit filed by Samsung includes: (1) Samsung Electronics in December 2024

On the 19th of the month, a patent infringement lawsuit and a licensing terms lawsuit were filed in the UK High Court.

(2) Samsung Electronics filed a lawsuit in the Frankfurt Court, Germany on December 20, 2024.

## Intellectual Property Finance

(3) Samsung Electronics filed an antitrust lawsuit in the United States on February 25, 2025.

An antitrust lawsuit was filed in the U.S. District Court for the Northern District of California; (4) Samsung Electronics

The cases were heard on February 28 and March 25, 2025, respectively, at the Munich Regional Court in Germany.

(5) Samsung Electronics filed a patent infringement lawsuit on February 28, 2025.

The European Patent Unified Court, Mannheim Branch, filed a patent infringement lawsuit; (6) three

On February 28, 2025, Xing Electronics filed two lawsuits with the Hangzhou Intermediate People's Court.

This patent infringement lawsuit was subsequently designated to be heard by this court by the Supreme People's Court. Case number:

For (2025) Yu 01 Min Chu No. 538 and 539.

The lawsuits filed by ZTE include: (1) ZTE Corporation's actions in December 2024.

On the 23rd of the month, ZTE filed this lawsuit with this court; (2) ZTE Corporation respectively in 2025

On January 1st and January 10th, patent infringement lawsuits were filed with the Munich court in Germany.

(3) ZTE Corporation filed a lawsuit with the European Patent Unified Court in Manchester on January 1, 2025.

The Heim branch filed a patent infringement lawsuit; (4) ZTE Corporation filed a lawsuit in January 2025.

On the 15th, a patent infringement lawsuit was filed in a court in Rio de Janeiro, Brazil; (5) ZTE

On January 16, 2025, the communication filed two cases with the Hangzhou Intermediate People's Court.

The patent infringement lawsuit was subsequently designated to be heard by this court by the Supreme People's Court, and the case number is [case number missing].

(2025) Yu 01 Min Chu No. 540 and 541.

(II) Facts regarding Samsung Electronics' complaint to ETSI against ZTE Corporation

On July 16, 2025, Samsung Electronics filed a complaint with ETSI against ZTE for violating [a certain regulation/compliance].

The ETSI Intellectual Property Policy was adopted, requesting that ZTE's intellectual property rights be transferred from all...

Removed from standards and technical specifications involving 2G, 3G, 4G, and 5G.

On October 14, 2025, according to ZTE's proposal dated October 9, 2025...

Following the filing of an application for a preliminary injunction, the Munich court in Germany issued a preliminary injunction against Samsung Electronics.

The injunction requires Samsung Electronics to: (1) refrain from submitting to ETSI any allegations against ZTE Corporation for breach of contract.

## Intellectual Property Finance

Complaints violating Section 6.1 of the ETSI Intellectual Property Policy, particularly those involving Samsung Electronics.

The son should withdraw his application dated July 16, 2025, within 24 hours of the service of the preliminary injunction.

The complaint was submitted to ESTI on September 30, 2025, and the Standardization Group was ensured to comply with the requirements.

(1) ETSI terminates the procedure initiated by the complaint; (2) prohibits further action against ETSI.

The above-mentioned complaint was submitted; (3) prohibit the initiation or continuation of any legal action to prohibit

ZTE Corporation is pushing through the procedures of the German courts, etc.

On October 16, 2025, Samsung Electronics withdrew its application to ETSI regarding...

ZTE filed a complaint and requested ETSI to terminate the related investigation initiated based on the complaint.

program.

On October 17, 2025, the Director General of ETSI presented awards to Samsung Electronics and ZTE Corporation.

Send an email to confirm that the relevant procedures have been completed.

#### IV. Regarding the agreements presented by the parties in this case

The comparable agreements claimed by the parties in this case include the 2021 Agreement and the [unclear text - possibly related to a specific agreement or agreement].

ZTE Apple 2020 Agreement, Samsung Electronics Ericsson Agreement, Samsung Electronics

The agreement comprises five documents: the Nokia Agreement, the Samsung Electronics Interoperable Digital Protocol, and others. ZTE Corporation...

The company believes that the "Samsung Electronics Ericsson Agreement", "Samsung Electronics Nokia Agreement", and "Samsung Ericsson Agreement" are valid.

The "Star Electronic Interactive Digital Protocol" is a comparable protocol for the 5G portion of this case. (2021)

The "ZTE-Apple 2020 Agreement" is not a comparable agreement in this case.

As a concession, ZTE can agree to use the "2021 Agreement" as the basis for this case regarding 2G-4G.

Comparable agreements in part. Samsung considers the 2021 agreement and the ZTE-Apple agreement to be comparable.

The "2020 Agreement" is a comparable agreement in this case, as are the "Samsung Electronics Ericsson Agreement" and the "Samsung-Ericsson Agreement".

The "Singapore Electronics Nokia Agreement" and the "Samsung Electronics Interoperable Digital Protocol" are not applicable in this case.

Compared to the agreement, Samsung also cited the "Samsung Electronics Datang Agreement" and Samsung Electronics...

Samsung Electronics' Patent Licensing Agreement with Docomo (hereinafter referred to as the "Samsung Electronics Docomo Agreement")

Intellectual Property Finance

(Agreement)

Samsung Electronics and NEC's Patent Cross-License Agreement

(hereinafter referred to as the "Samsung Electronics NEC Agreement") and the "Samsung Electronics Huawei Agreement")

Five agreements were cited as references to support their viewpoint.

(a) Facts relating to comparable agreements claimed by both parties

1. The 2021 Agreement

(1) Agreement content

On July 9, 2021, ZTE Corporation and Samsung Electronics signed the "2021 Agreement".

The agreement is the first patent licensing agreement reached between ZTE and Samsung Electronics.

Agreement. The main terms of the agreement are summarized as follows: The preamble states that, given the circumstances...

ZTE and Samsung Electronics each possess technological expertise in 2G, 3G, 4G, and/or 5G standards.

Patents that are technically necessary, or declared as technically necessary, and other patents;

Both parties manufacture, commission manufacture, sell, offer for sale, import and/or use products that conform to [the agreement/standard].

Products that meet License Standard-1 or License Standard-2, and for which a patent license is desired.

Non-exclusive license; meanwhile, all parties hope to have more time to evaluate 5G technology.

Market impact and intellectual property landscape, as well as having more time to discuss 5G between the two parties.

We will engage in friendly negotiations regarding potential future agreements on the technology. If such negotiations fail to reach an agreement...

However, this also preserves the right to file legal claims regarding 5G technology in the future.

And is not subject to any statute of limitations or other similar factors. Licensing Standard: Agreement

The licensing standards under the agreement include "Licensing Standard-1" and "Licensing Standard-2".

"Standard-1" refers to the Wi-Fi standard, Bluetooth standard, and 2G, 3G, and 4G cellular standards.

The wireless access network specification, and "in any case, 'Licensing Standard-1' is..."

Excluding 5G; "License Standard-2" refers to the AAC standard, ATSC 3.0 standard,

DVB-T2 standard, HEVC standard, VC-1 standard, and VVC standard. Licensed patents:

Intellectual Property Finance

As far as Samsung Electronics is concerned, the licensed patents are any and all licensees of ZTE Corporation.

Quasi-essential patents and implementation patents; in ZTE's case, the licensed patents are held by Samsung.

All and all licensed standard essential patents and implementation patents for electronic devices. Among them, "license"

"Standard essential patents" refers to the licensing of standard essential patents-1 and standard essential patents.

Patent-2 is technically necessary to address both License Standard-1 and License Standard-2.

Any patent that is or is declared necessary, and once any patent becomes

The licensed standard essential patents under the agreement-1 should always be the standard essential patents.

A patent is considered a standard essential patent for licensing, even if the patent includes at least one of the following:

Claims that are technically necessary for 5G, or claims that have been declared as necessary for 5G.

It is necessary (or potentially necessary), regardless of the actual necessity of the patent for 5G;

"Practicing a patent" refers to any and all patents, but excludes those that require licensing standards.

Essential patents, 5G standard essential patents, and excluded patents. Licensed products: Samsung Electronics.

All and all mobile devices and infrastructure equipment of ZTE and its respective companies.

It further stipulates that "pure 5G functionality" in any licensed product is not included in this agreement.

The following is permitted. "Pure 5G functionality" refers to "any and all [functions related to] any [specific application]".

5G standard specifications include mandatory or optional features, but exclude any and all features for any

"Licensing Standard-1 or Licensing Standard-2 Mandatory or Optional Features", and if

Any function that implements both 5G standard specifications and Licensing Standard-1 or Licensing Standard

If it is classified as Quasi-2, then this function is not a pure 5G function. License period: If ZTE Corporation...

Upon timely receipt of payment, both parties grant each other a non-exclusive license, which is valid only for [specific purposes].

From the effective date of January 1, 2021 to December 31, 2023

Valid for the specified period (hereinafter referred to as the license period). Historical exemptions: at ZTE Corporation.

Upon timely receipt of payment from Samsung Electronics, both parties shall waive their obligations under this Agreement.

Patents granted prior to this date apply to licensed products (excluding any purely 5G-enabled products).

## Intellectual Property Finance

All rights claims, liabilities, and damages. Patent Silence: Patents under the Agreement

The patent silence includes mutual "5G patent silence" and "additional patent silence".

Among them, "5G patent silence" refers to the timely receipt of payment from Samsung Electronics by ZTE.

Following payment, the parties shall agree to a three-year term from the effective date of the agreement to December 31, 2023.

During this period, neither party will share any of their respective 5G standard essential patents with the other.

Any actions taken during or prior to this period assert any rights; "Additional patent silence"

This refers to the agreement reached between ZTE and Samsung Electronics after ZTE receives payment on time.

During the four-year period from the effective date to December 31, 2024, neither party will [engage in any dispute concerning their respective obligations].

Any patents related to the other party's patent silencing products during and prior to this four-year period.

Any action asserts any rights, and the patented silent product refers to a product compliant with Bluetooth.

Complete audio systems, televisions, and home appliances conforming to standard and/or Wi-Fi standards.

A promise not to sue: After ZTE received payment from Samsung Electronics on time, the two parties agreed not to sue.

The period from January 1, 2024 to December 31, 2024 (hereinafter referred to as the "CNS period")

"Neither party claims any licensed patents against the other's licensed products, and in CNS..."

During this period, neither party shall incur any damages from the licensed products. If either party...

If the agreement expires and a new agreement is signed or a new patent licensing agreement is entered into, both parties shall...

Consider the value of the exemption covering the CNS period. Payment terms: Samsung Electronics shall pay...

ZTE Payment Total

[REDACTED]

[REDACTED]

[REDACTED]

Governing law and jurisdiction: interpretation, understanding, and application of the agreement.

The validity, performance, and effect of this agreement are governed by the substantive laws of the State of California, and

Conflict of laws not applicable to California or any other jurisdiction

but.

(2) The parties' understanding of the agreement

## Intellectual Property Finance

Both parties acknowledged that they had a correct understanding and interpretation of the provisions of the 2021 Agreement.

The substantive laws of the State of California shall apply.

Samsung believes that the licensed patents in the 2021 Agreement contain a statement.

Patents essential to the 2G-4G standard and those overlapping with patents essential to the 2G-4G standard.

The licensing fees for some essential 5G standard patents cover previous exemptions and CNS periods.

The fees, i.e., the fees for the period from January 1, 2013 to December 31, 2024.

For this purpose, Samsung provided Georgetown, Washington, D.C.

Testimony from university law professor John R. Thomas to support Samsung's claims.

Understanding the 2021 Agreement. In the testimony of John R. Thomas, regarding the [unclear text - possibly related to the agreement]..

The relevant provisions of the California Civil Code were explained, and it was found that Article [number missing] of the law [text missing].

Article 1636 stipulates that "the interpretation of a contract should, as far as possible, achieve the consensus reached by both parties at the time of its conclusion."

"Intent, provided that intent is ascertainable and lawful," Article 1638 states, "If the contract..."

The language is clear, unambiguous, and without any absurdity; the contract should be interpreted in accordance with that language.

The interpretation, Article 1639, stipulates that "when a contract has been concluded in writing and there is a possibility that it may be effective in writing, the contract may be effective in writing."

If the intent of the parties is ascertained solely through written documents, then the determination should be based solely on those written documents.

"Intended meaning," Article 1641 stipulates that "the interpretation of a contract shall be based on the entirety of the contract."

To the extent reasonably practicable, ensure that all parts of the contract are valid and that each clause is legally binding.

"The terms in the contract shall be mutually explanatory," Article 1644 stipulates that "the language used in the contract shall be in accordance with..."

Its usual meaning is understood.

ZTE Corporation provided the aforementioned California Civil Code to Samsung.

There is no objection to the content of the terms themselves, but there are disagreements regarding certain clauses of the 2021 Agreement.

The understanding is similar, believing that the agreement does not contain any licensing of 5G standard essential patents.

The fee only covers the license period from January 1, 2021 to December 31, 2023.

The fee does not include expenses incurred during past sales and CNS periods.

## Intellectual Property Finance

(3) Negotiation facts related to understanding the content of the agreement

To demonstrate that they had a more accurate understanding of the 2021 Agreement, both parties presented [evidence/examples].

The emails exchanged during the negotiation process of the agreement were also provided by Samsung.

Testimony of Hojin Chang, Senior Vice President of Electronics and Head of Licensing Team at ZTE

The company provided testimony from Tong Xin, head of ZTE's licensing department. According to the negotiations...

Based on the email content, witness testimonies, and statements of the parties involved, this court has ascertained that the parties agreed regarding the "2021..."

The negotiations for the "Annual Agreement" were mainly divided into two phases: ZTE and Samsung Electronics.

Direct bilateral negotiations, and cooperation between the two parties at Innovius (hereinafter referred to as...)

The negotiations were conducted with the participation of "Innovius". No past issues were discussed during the negotiations.

Negotiation of consideration for the exemption clause. The parties have differing interpretations of the provisions of the 2021 Agreement.

The relevant negotiations regarding the differences are summarized below.

First, does the 2021 Agreement involve the facts of negotiations related to 5G licensing?

[REDACTED] ZTE sent an email to Samsung Electronics, inviting...

Samsung Electronics and ZTE have begun negotiations on licensing essential patents for the 4G LTE standard.

[REDACTED] ZTE sent an email to Samsung Electronics, offering...

Xingtong Communications [REDACTED] Claims Comparison Table. [REDACTED]

[REDACTED] Samsung Electronics sent an email to ZTE, providing Samsung Electronics... [REDACTED]

[REDACTED] Claims Comparison Table.

During the direct bilateral negotiations between ZTE and Samsung Electronics, neither side...

Sending the other party a comparison table of 5G standard essential patent claims, but without specifying the 5G standard...

Technical discussions were held regarding quasi-essential patents.

On December 30, 2020, Innovius sent an email to ZTE Corporation, proposing...

They provided the first list of key terms for a potential deal with Samsung Electronics, indicating their interest in China.

For Xingtong Communications, it means "collecting your 4G patent portfolio fees and licensing it to you after three years".

Intellectual Property Finance

"An excellent opportunity for Fang's 5G patent portfolio." The accompanying term sheet states that the licensee...

The term "standard" refers to the cellular communication standards commonly referred to as 2G, 3G, and 4G standards. Licensing standards are not...

Including 5G standards.

On January 18, 2021, Innovius sent an email to ZTE Corporation, proposing...

for [REDACTED]

[REDACTED]

On April 29, 2021, Innovius [REDACTED] supply

ZTE's updated draft patent agreement. The accompanying draft agreement states that ZTE...

The communication protocol's preamble includes provisions regarding the parties' desire to reach an agreement on 2G, 3G, and 4G technologies.

The licensing of the technology also hopes to allow more time to assess the market value of 5G technology.

The statement regarding goodwill negotiations on potential future agreements involving 5G technology; ZTE Corporation

Xunlei changed "License Standard-1" to "Exclude 5G"; ZTE changed "License Product" to...

The term "product" has been expanded to include "any 5G functionality in any licensed product shall not be subject to this agreement."

The limitation of "obtaining a license" was removed; ZTE added exempted products to the exemption clause.

The product does not include the limitation of "any 5G features".

On May 3, 2021, Innovius sent an email to Samsung Electronics stating that... [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

On May 28, 2021, Innovius sent an email to ZTE Corporation, stating that...

"The 4G patents will be licensed to all licensed products." On the same day, ZTE confirmed that...

All licensed products will be granted licenses for 4G standard essential patents, while 5G functionality will not.

"Should be permitted."

## Intellectual Property Finance

On June 22, 2021, Samsung Electronics issued a letter to ZTE and Innovius.

Email, providing

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

On July 9, 2021, the two parties signed the "2021 Agreement," which includes a preamble.

The points retained the hope that ZTE would add more time on April 29, 2021.

To assess the market value of 5G technology and to discuss potential future collaborations involving 5G technology.

The statement regarding conducting friendly negotiations was retained; the licensing standards remained as of April 29, 2021.

ZTE excludes modifications to the 5G standard under "License Standard-1"; licensed products are guaranteed.

Samsung Electronics' statement dated June 22, 2021, regarding not obtaining a license under this agreement was retained.

The modification is for "pure 5G functionality".

Second, negotiations related to the non-prosecution undertaking (CNS) clause of the 2021 Agreement.

fact.

On January 18, 2021, Innovius sent an email to ZTE Corporation, providing...

Already

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

On January 20, 2021, Innovius sent an email to ZTE Corporation.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] yy

Intellectual Property Finance

On January 29, 2021, ZTE sent an email to Innovius, providing...

The revised term sheet will no longer include the clause stating that "this commitment will be carried out along with the patent."

The clause "the agreement remains valid even after the transfer of rights" has been amended to apply only in the fourth year (2024).

effect.

On April 7, 2021, Innovius sent an email to Samsung Electronics, providing... [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

On April 29, 2021, Innovius [REDACTED], supply

ZTE's updated patent agreement shows that ZTE has deleted clause 3.4.

Neither party may assert any rights during the CNS period, nor shall any damages be awarded, and neither party may [do anything related to the agreement].

"Mutual commitment" to claim damages during and in the future during the CNS period.

On May 28, 2021, Innovius sent an email to ZTE Corporation, stating that...

"At least the fourth year of the agreement must include a mutual non-prosecution commitment."

On that day, ZTE sent an email to Innovius, indicating that ZTE agreed to [the following text is incomplete and likely refers to a separate event:] ...in the fourth...

The parties shall not bring each other into suit for a period of time, but this clause shall be non-exhaustive.

On June 2, 2021, ZTE Corporation commissioned a US law firm to file a lawsuit against Innovius.

The email included a draft agreement stating that ZTE had removed the non-litigation commitment clause.

The note also stated that "ZTE remains willing to work on longer timeframes and/or broader product coverage."

"We are negotiating with your explicit permission, but the price is higher."

On June 16, 2021, Samsung Electronics sent an email to Innovius. [REDACTED]

[REDACTED]

Intellectual Property Finance

[REDACTED]

[REDACTED]

On June 18, 2021, Samsung Electronics issued a letter to ZTE and Innovius.

mail, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] On the same day, ZTE replied to the email, stating that it was discussing matters related to CNS.

Before proceeding with the next discussion, it is hoped that it will be confirmed that regardless of the specific definition of CNS, CNS should be a dual-classification system.

Towards reciprocity.

The wording of the non-litigation commitment clause in the 2021 Agreement signed by both parties is consistent with the 2021 agreement.

The content confirmed by both parties in the email on June 18th was consistent.

## 2. ZTE and Apple 2020 Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. Samsung Electronics Ericsson Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

## Intellectual Property Finance

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance

[Redacted text block]

4. The Samsung Electronics-Nokia Agreement

[Redacted text block]

Intellectual Property Finance

[Redacted text block]

5. Samsung Electronics Interoperable Digital Protocol

[Redacted text block]

Intellectual Property Finance

[Redacted text block]

(ii) Details of the five reference agreements presented by Samsung

1. Samsung Electronics Datang Agreement

Intellectual Property Finance

[Redacted text block]

2. Samsung Electronics Multicom Agreement

[Redacted text block]

Intellectual Property Finance

[Redacted text block]

3. [Redacted text block]

[Redacted text block]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance

4. Samsung Electronics NEC Agreement

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. Samsung Electronics-Huawei Agreement

[REDACTED]

[REDACTED]

[REDACTED]



Samsung believes that the three agreements were signed between it and third-party rights holders not involved in the case.

The agreements signed are of limited relevance to this case. Specifically, the "Samsung Electronics Interactive Data Agreement" is of little reference value.

## Intellectual Property Finance


The agreement was reached through arbitration, not based on free market pricing.

The arbitration body determined that the licensing fee did not reflect the licensing of the interactive digital patent portfolio.

The market value of the Samsung Electronics Ericsson Agreement and the Samsung Electronics Nokia Agreement.

Throughout the process of reaching the agreement, Samsung Electronics faced widespread litigation pressure and bans.

The threat is not "based on voluntary agreement between the two parties in the absence of psychological coercion".

The agreement reached by the merchants likely includes licensing fees that exceed the FRAND range. 













 In addition, Samsung, in conjunction with the "Samsung Electronics Datang Agreement" and "Samsung Electronics Multi-Tang Agreement",

Como Agreement  Samsung Electronics NEC Agreement

The Samsung Electronics-Huawei Agreement states that the aforementioned agreement demonstrates the validity of the agreement.

The Lixin Agreement, the Samsung Electronics-Nokia Agreement, and the Samsung Electronics Interoperable Digital Protocol.

The 5G cumulative fee rate obtained from the dismantling is unreliable, and the similarity between the rights holders is also a factor.

In terms of nature, the "Samsung Electronics Datang Agreement" and the "Samsung Electronics Huawei Agreement" have similar characteristics.

Given its high reference value and considering that Huawei's patent strength is significantly stronger than ZTE's,

Datang's patent strength is more similar to ZTE's, and the breakdown results of the aforementioned protocols...

It can also support Samsung's FRAND licensing fee claim.

(iv) ZTE Corporation asserts its claims regarding the "2021 Agreement" and the "Samsung Electronics-Apple 2020 Agreement".

Opinions and relevant facts that are incomparable to the "Annual Agreement"

1. ZTE Corporation claims that its business operations were abnormal during the negotiation period of the two licensing agreements.

Relevant facts regarding environmental distortion

## Intellectual Property Finance

In March 2017, ZTE Corporation and the Bureau of Industry and Security of the U.S. Department of Commerce...

The Department of Justice and other agencies reached an agreement to pay a total of approximately \$892 million in fines and agree to accept [further action].

The seven-year suspension of the export denial order and an additional \$300 million fine.

[REDACTED]

[REDACTED]

[REDACTED] In June 2018, the U.S. Chamber of Commerce...

The Department of Commerce has ordered ZTE to pay a \$1 billion fine. [REDACTED] 2018

In July of that year, ZTE reached an alternative settlement agreement with the U.S. Department of Commerce, paying...

They were fined \$1 billion and ordered to pay a \$400 million bond. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

According to ZTE's annual reports from 2018 to 2021, in 2018, ZTE...

The company's operating revenue was RMB 85.51 billion, and its operating profit was a loss of RMB 6.12 billion.

RMB 100 million, a year-on-year decrease of 109.03%, which is the sum of operating cash flow and investing cash flow.

ZTE's free cash flow was approximately negative RMB 9.15 billion. In 2019, ZTE's operating...

Operating revenue was RMB 90.737 billion, and operating profit was approximately RMB 8.97 billion.

ZTE's free cash flow was negative RMB 3.2 billion in 2020.

Operating revenue was RMB 101.451 billion, and operating profit was approximately RMB 2.55 billion.

ZTE's free cash flow was approximately RMB 3.15 billion in 2021.

Operating revenue was RMB 114.52 billion, and operating profit was approximately RMB 9.1 billion.

Intellectual Property Finance  
Free cash flow is approximately RMB 5.13 billion.

According to ZTE's 2020 and 2021 annual reports, from 2019 to 2021...

During the year, R&D expenses reached RMB 4.77 billion in 2021, compared to 2020.

ZTE's year-on-year growth was 41.5%. Third-party financial analysis for 2020 shows that...

The company's debt-to-asset ratio is 72.92%, up from 68.48% at the end of 2017.

It rose by 4.44 percentage points, reaching a relatively high level in recent years; a horizontal comparison shows that...

Among the world's four largest telecommunications equipment manufacturers, the company also has the highest debt-to-equity ratio.

At the end of 2019, the company's debt-to-asset ratio was significantly higher than the industry average.

"Approximately 7 percentage points."

[REDACTED]

[REDACTED]

[REDACTED] Zhongxing Gong

The company proposed that in 2020, it should still prioritize "cash flow, with equal emphasis on profitability and scale, and risk management."

The basic principle is "risk control," and it is explicitly stated that "cash flow is a matter of life and death."

We will set breakdown indicators for cash flow, including revenue growth, etc.

ZTE stated that global 5G network construction began in 2019. 2020

Since 2015, despite the challenges posed by the COVID-19 pandemic, leading global operators have begun to launch 5G.

Commercial use has begun, with 5G networks being deployed in major cities both domestically and internationally, and 5G application practices are taking place in major cities.

The industry needs to implement this. In 2021, 5G core networks, 5G private networks, and 5G messaging providers...

With large-scale deployment of networks and other infrastructure, 5G network construction is advancing in depth, and the 5G industry should...

To accelerate maturity, ZTE has continuously increased its investment in 5G research and development, and its R&D personnel...

The number of employees increased significantly, and at the same time, due to the marked increase in demand in the 5G market, ZTE's inventory...

The demand for inventory has increased significantly, leading to enormous financing pressure, which is mainly met through debt financing.

ZTE is facing a cash flow shortage due to its working capital needs.

## Intellectual Property Finance

2. ZTE argues that Apple and Samsung Electronics have a superior negotiating position.

Relevant facts regarding the imbalance of negotiating positions between the two parties during the negotiations of the two agreements

(1) ZTE believes that Apple and Samsung Electronics are the most profitable companies in the world.

A powerful mobile phone company with strong financial resources to support long-term negotiations and global legal processes.

sequence

According to IDC's 2020 Worldwide Mobile Phone Tracker report, three

Star Electronics and Apple shipped 266.7 million and 206.1 million units respectively.

With market shares of 20.6% and 15.9%, they rank first and second globally. (Counterpoint)

Data shows that between 2017 and 2021, Apple generated a staggering \$407.2 billion in revenue.

Samsung Electronics ranked first with an average revenue of \$71.8 billion.

Its revenue ranked second, far exceeding that of other mobile phone manufacturers. (Q1 2019)

During the period up to the second quarter of 2021, Apple's average revenue share was approximately 36%.

Samsung Electronics' average operating profit share is approximately 70%, ranking first, and its average revenue share is...

Its share of revenue was approximately 18%, and its average operating profit share was approximately 17%, ranking second. 2020

In the fourth quarter of that year, Apple's profit share in the global smartphone market was 86%.

Its share of annual profits is nearly four times that of Samsung Electronics, which ranks second.

Apple and Qualcomm had legal battles in 16 countries worldwide between 2017 and 2019.

More than 50 lawsuits were filed within the jurisdiction, which were later settled. (2021-2022)

During the year, Apple and Ericsson also negotiated in seven locations worldwide to renew their licensing agreement.

The case was litigated in the jurisdiction. Historically, Apple has also sued Samsung Electronics and Nokia.

Major rights holders such as Asia are also involved in disputes related to standard-essential patents. ZTE Corporation...

The company believes this further demonstrates its extensive litigation experience and strong negotiating position.

(2) ZTE believes that Apple is in a strong position during the negotiations.

Intellectual Property Finance

The testimony given by Tong Xin, Deputy Director of the Intellectual Property Department of ZTE Corporation, states:



3. ZTE Corporation argues that multiple overseas precedents support the claim that deteriorating financial condition is a reason for financial distress.

## Intellectual Property Finance

A key consideration in excluding comparable agreements, and there are precedents that have explicitly excluded ZTE in [the relevant agreements].

Agreements signed during this period

In the case of *Lenovo Group Limited v. Interactive Digital*, Interactive Digital submitted

The licensing agreement it signed with ZTE in 2019. An analysis of whether this agreement is appropriate...

When the cooperation was considered a comparable agreement, the UK High Court determined that the agreement's signing context involved...

The huge fines ZTE paid in 2017, among other things, caused ZTE to...

The company was on the verge of bankruptcy in 2018. Testimony from the Vice President of Licensing at Interactive Digital in the case revealed that:

"We are very concerned, not only because we may not be able to obtain permission, but also..."

Even if we reach a license agreement, ZTE may simply be unable to pay us.

"It is obvious that, given ZTE's tight cash flow situation, it is simply unable to..."

"Pay all fees." Therefore, the British courts ruled that the fees deducted from the agreement...

The rate may be low, and this protocol is not a reliable comparable protocol.

In the *Wireless Planet v. Huawei* case, the UK High Court ruled on the 2016 *Wireless...*

The licensing agreement signed between Planet and Samsung Electronics is considered to be related to the contractual obligations under that agreement.

The background is that *Wireless Planet* is in serious financial trouble and on the verge of bankruptcy, and then...

Line Planet's patent portfolio was acquired by PanOptis for less than its market value.

The agreement was granted to Samsung Electronics at a low price, therefore, based on the overall assessment, the agreement does not constitute a representation of wireless...

Useful evidence of the market value of the planetary patent portfolio was not adopted as a comparable agreement.

In the *Apple v. Optis* case, Apple argued that ZTE Corporation...

The UK Court of Appeal determined that the *Apple 2020 Agreement* was a comparable agreement.

This agreement was not adopted as a comparable agreement when calculating FRAND rates.

V. Economic expert reports and corresponding rebuttals submitted by both parties

Regarding the calculation of the FRAND licensing fee in this case, both parties hired economics experts.

Provide corresponding economic analysis reports and rebuttal opinions, and act as an expert assistant.

## Intellectual Property Finance

To appear in court and make a statement.

The economics expert hired by the plaintiff is Dr. Huang Kun, who is an economic consultant.

The defendant is a partner at Econic Partners, a consulting firm based in Beijing.

The economics expert hired was Dr. Deng Fei, who works for an economic consulting firm.

Vice President of Charles River Associates (CRA) Oakland, USA

Judgment.

Regarding the data and theories cited in the report opinions issued by the aforementioned economics experts...

Articles, judicial precedents, etc., are presented as footnotes or appendices, with some core elements...

The relevant materials are presented as evidence in this case. Both parties have discussed their economic opinions.

Supporting evidence and rebuttals also included relevant news reports and online articles that were not footnotes.

Evidence includes academic papers, expert opinions, and domestic and international precedents. Economic reports from various parties are also relevant.

Both the family report and the expert witness's testimony in court detailed their specific method of calculating licensing fees.

Both parties expressed their opinions on the problems existing in the other party's calculation method. Both parties submitted...

The contents of the economics report and the rebuttals are as follows:

(a) Dr. Huang Kun's method of calculating licensing fees

1. Dr. Huang Kun's use of the 2021 Agreement to break down 2G-4G licensing rates

Solution calculation

Dr. Huang Kun broke down the 2024 Agreement based on the 2021 Agreement.

The 2G-4G licensing fee ranges for ZTE and Samsung Electronics have been adjusted accordingly.

Obtain 2G-4G licensing rates applicable to the 2024 Agreement.

First, by disassembling the "2021 Agreement," we can obtain information about ZTE Corporation under that agreement.

Samsung Electronics' 2G-4G single-mode rates. The licensing period for the 2021 agreement is...

For the three years from 2021 to 2023, the licensed patents are essential patents for both parties' 2G-4G standards.

Including some other patents, the licensed products are terminal equipment and base stations for both parties.

Intellectual Property Finance

Star Electronics made a one-time payment to ZTE Corporation in the year the agreement was signed. [REDACTED]

[REDACTED] The net license fee. According to ZTE's interpretation of the "2021 Agreement,"

The net license fee under the 2021 Agreement does not include any provisions for the non-action period in 2024.

The consideration and the value of any historical exemptions, and without any 5G standard essential patents.

License will be granted. Since this is a cross-licensing agreement, the net license fee is ZTE's.

The difference between the amount of the one-way licensing fee payable by the telecommunications company and Samsung Electronics, and the one-way...

The licensing fee amount is calculated by multiplying the sales revenue of the licensed products for each generation and type by [the sales revenue of the licensed products].

The sum after applying the corresponding royalty rates to the rights holders. This assumes reasonable assumptions regarding the various royalty rates.

After determining the proportional relationship between rates, data from Canalys, IDC, and Dell'Oro were publicly available.

Dr. Huang Kun analyzed the actual or projected sales revenue of each product to obtain the agreement.

ZTE's 2G, 3G, and 4G single-mode rates are as follows: [REDACTED]

[REDACTED] Samsung Electronics' 2G, 3G, and 4G single-chip chips

The model fee rates are respectively [REDACTED]

[REDACTED]

Secondly, calculate the 2G-4G coverage of ZTE and Samsung Electronics under the 2024 Agreement.

Single-mode fee. Dr. Huang Kun comprehensively referenced IPlytics, Tech+IP, and Beijing Mo

The deadline for patent searches by Qiu et al. was from December 31, 2019 to 2021.

Three publicly available 4G reports dated between December 31 and 2021 were obtained from the "2021..."

At the time the agreement was signed, ZTE held 8.4% of 4G patents, while Samsung Electronics held...

4G patents account for 10.3%, and further references were made to IPlytics and Parola.

The deadlines for patent searches conducted by organizations such as Analysis, Tech+IP, and Beijing Moqiu are as follows:

Four 4G reports dated December 31, 2019 and later, obtained from ZTE Corporation.

The company holds 8.9% of 4G patents, while Samsung Electronics holds 10.5%.

Both figures represent a slight increase compared to 2021. Therefore, Dr. Huang Kun, based on the 4G patents of both parties...

## Intellectual Property Finance

Based on changes in power dynamics, the 4G single-mode tariff rates derived from the breakdown of the 2021 agreement will be...

The corresponding upward adjustment was made. Furthermore, because the 3G and 2G standards had been largely stable for many years,

Dr. Huang Kun believes it is reasonable to assume that ZTE and Samsung Electronics' current 3G...

The proportion of 2G patents is consistent with the proportion of patents at the time of signing the 2021 Agreement.

Based on this, Dr. Huang Kun calculated the applicable ZTE Corporation under the 2024 Agreement.

2G of the news      3G      The 4G single-mode rates are respectively

Samsung Electronics' 2G, 3G, and 4G single-chip solutions

The model fee rates are respectively

Furthermore, Dr. Huang Kun pointed out that due to the 2021 Agreement...

Also signed by ZTE and Samsung Electronics, in the event of any possible consolidation of regional agreements.

The discount is already reflected in the applicable rates, so it applies to the 2024 Agreement.

There is no need to make further adjustments to regional discounts when the agreement is reached.

Secondly, calculate the 4G coverage of ZTE and Samsung Electronics under the 2024 agreement.

Multi-mode pricing. Dr. Huang Kun's analysis of the value of 4G, 3G, and 2G in 4G multi-mode devices.

With a weighted average of 8:1:1, the ZTE value applicable to the 2024 agreement is obtained.

The 4G multi-mode rate for communication is      Samsung Electronics' 4G multi-mode fee

rate

Finally, considering the disagreements between the two parties regarding past exemptions, ZTE...

Further details regarding whether the 2021 Agreement includes consideration for previous waivers will be discussed.

Multiple assumptions were defined, and the same calculation method and decomposition logic were used to...

The 2021 Agreement has been dismantled, and its corresponding provisions and outcomes are provided for the court's reference.

The body is as follows:

The original setting was that it did not involve any past exemption value; setting one is "2021

The annual agreement covers the period from September 2018 (when the two parties first made their formal contact) to 2020.

Intellectual Property Finance

The previous exemption consideration for the year; setting two is that the 2021 Agreement includes the period since 2015.

The consideration for past exemptions up to 2020; setting three as included in the 2021 Agreement.

The consideration for past exemptions from 2013 to 2020.

Under the above settings, the ZTE Corporation obtained by dismantling the "2021 Agreement" and

Samsung Electronics 2G-4G Single-Mode Rates:

| situation                                              | ZTE's single-mode tariff rate under the 2021 Agreement; Samsung |    |    | Electronics' single-mode tariff rate under the 2021 Agreement . |    |    |
|--------------------------------------------------------|-----------------------------------------------------------------|----|----|-----------------------------------------------------------------|----|----|
|                                                        | 2G                                                              | 3G | 4G | 2G                                                              | 3G | 4G |
| Original settings<br><br>(No exemption assignment)     |                                                                 |    |    |                                                                 |    |    |
| Setting 1<br><br>(October 2018)<br><br>- December 2020 |                                                                 |    |    |                                                                 |    |    |
| Setting 2<br><br>(2015-2020)<br><br>Year)              |                                                                 |    |    |                                                                 |    |    |
| Setting 3<br><br>(2013-2020)<br><br>Year)              |                                                                 |    |    |                                                                 |    |    |

Based on the above results, and in accordance with the 2021 Agreement to the 2024 Agreement...

The changes in the patent strength of ZTE and Samsung Electronics, and the implications for applying the "2024 Patent Law".

Annual Agreement: ZTE and Samsung Electronics 2G-4G Single-Mode Rates:

| situation                                          | Applicable to the 2024 Agreement |    |    | Applicable to the 2024 Agreement       |    |    |
|----------------------------------------------------|----------------------------------|----|----|----------------------------------------|----|----|
|                                                    | ZTE single-mode rate             |    |    | Samsung Electronics Single-Model Rates |    |    |
|                                                    | 2G                               | 3G | 4G | 2G                                     | 3G | 4G |
| Original settings<br><br>(No exemption assignment) |                                  |    |    |                                        |    |    |
| Setting 1<br><br>(2018 Q4-2020)                    |                                  |    |    |                                        |    |    |
| Setting 2<br><br>(2015-2020)                       |                                  |    |    |                                        |    |    |
| Setting 3<br><br>(2013-2020)                       |                                  |    |    |                                        |    |    |

The corresponding 4G multi-mode rates applicable to both parties under the 2024 Agreement are as follows:

| situation                                          | Applicable to the 2024 Agreement | Applicable to the 2024 Agreement       |
|----------------------------------------------------|----------------------------------|----------------------------------------|
|                                                    | ZTE 4G multi-mode rates          | Samsung Electronics 4G Multimode Rates |
| Original settings<br><br>(No exemption assignment) |                                  |                                        |
| Setting 1<br><br>(2018 Q4-2020)                    |                                  |                                        |
| Setting 2<br><br>(2015-2020)                       |                                  |                                        |
| Setting 3<br><br>(2013-2020)                       |                                  |                                        |

2. Dr. Huang Kun used the top-down approach and comparable protocol approach to analyze 5G licensing rates.

Calculation

## Intellectual Property Finance

(1) Dr. Huang Kun's top-down method for calculating 5G licensing rates

In the top-down approach, Dr. Huang Kun first adopted the commonly used economic principle...

The price regression model was used to estimate the cumulative industry rate for 5G standards. After calculating 5G...

After applying the standard industry cumulative rate, further reasonable fees were obtained from ZTE and Samsung Electronics.

5G multi-mode and 5G single-mode licensing rates.

First, calculate the cumulative industry rate for 5G standards.

First, Dr. Huang Kun used Canalsys data from Q2 2019 to 2025.

The first quarter global smartphone sales data for the year featured price characteristics.

Based on model analysis, a correlation was constructed between mobile phone price and whether the phone supports 5G functionality.

A regression model of the relationship between dummy variables. Dr. Huang Kun added [something] to the model.

The input control variables exclude other related factors such as product function, performance, quality, and appearance.

The impact of features on mobile phone prices, and the effects of time, brand, and fixed effects on prices are investigated.

Implicit factors such as country and region are controlled to assess the effectiveness of 5G technology in 5G mobile phones.

The percentage increase in price (relative to another 4G phone with the same specifications)

The premium for 5G, also known as the "5G coefficient," is the percentage increase in the price of 5G. Specifically, Canalsys...

The data contains a total of 46 variables that record information related to the characteristics of mobile phone products. (Huang Kunbo)

The researchers conducted two tests: a baseline model and robustness checks. The baseline model was ranked...

Besides the four variables that overlap with other existing variables and those related to 5G virtual variables.

Two variables with high variability are "air interface technology" and "processor model".

It also added "time on the market" as one of the features to exclude new and old phone models.

The ultimate control variables considered for the impact on mobile phone prices include screen size and water.

Screen resolution, number of processor cores, processor speed, and Bluetooth support.

Does it support WiFi? Number of rear cameras? Does it support wireless charging? Battery?

There are a total of 41 variables, including capacity and operating system. From a conservative perspective, Huang Kunbo...

Intellectual Property Finance

The only possible adjustment in the robustness test is the "processor type".

The variable "sign" was added to the eigenprice regression model. Based on the above considerations, Huang Kunbo...

The formula for the eigenprice regression model used by the researcher is as follows:

$$\ln(\text{价格}_{itc}) = \beta_0 + \beta_{5G} \cdot 5G \text{ 虚拟变量}_i + \gamma \cdot X_i + \delta \cdot \text{已上市时长}_{it} \\ + \text{时间固定效应}_t + \text{品牌固定效应}_t + \text{国家固定效应}_c + \epsilon_{itc}$$

Using the natural logarithm of prices as the explained variable allows for better regression analysis.

The 5G virtual variable parameters estimated by the model disappear after a simple mathematical transformation.

The percentage premium consumers are willing to pay for 5G (i.e., the 5G factor);  $X_i$  represents the price of the phone.

The explanatory variables of  $i$ . Using this eigenvalue regression model formula, Huang Kun...

The final calculated 5G coefficient for the baseline model obtained by the PhD student was 21.57%, and the robustness check...

The 5G coefficient tested was 13.83%.

Secondly, Dr. Huang Kun used the following 5G standard industry cumulative tariff formula: 5G

Standard industry cumulative rate = (4G standard industry cumulative rate + 5G coefficient) × 4G

The ratio of the average selling price of 4G and 5G phones.

In this ratio, Dr. Huang Kun, from a conservative estimation perspective, used the period from 2019 to 2029.

The ratio of the average retail price of 4G and 5G mobile phones during the period when the industry had no upper limit, which covered the period.

The 5G licensing and payment period covered by the 2024 agreement also reflects the core of 5G.

The life cycle of the heart. Based on this, Dr. Huang Kun used Canalis Q2 2019 data.

Using data up to the first quarter of 2025, the period from 2019 to 2029 can be calculated.

The ratio of average selling price of 4G and 5G mobile phones (without industry price ceilings) is 39.16%. Further...

Step by step, combining the calculated 5G coefficient with the average selling price of 4G and 5G mobile phones

The ratio of price to cost, taking into account the relatively conservative 4G standard widely used in current judicial practice.

## Intellectual Property Finance

The industry's cumulative fee rate (6%-8%), calculated by Dr. Huang Kun using the benchmark model, is estimated...

The calculated cumulative industry rate for 5G standards is 10.8%-11.6%, based on robustness.

The estimated cumulative fee rate for 5G standard industry services is 7.8%-8.5%. (Detailed calculations follow.)

When discussing licensing fees, Dr. Huang Kun considered three scenarios regarding the cumulative industry rate for 5G standards.

(The level of conservatism gradually increases from the perspective of calculating Samsung's net licensing fees): Scenario 1,

For the period from 2019 to 2029, a uniform 10.8%-11.6% was obtained using the baseline model.

As a cumulative rate for the 5G standard industry; Scenario 2, for the period from 2019 to 2029,

The robustness test result of 7.8%-8.5% is uniformly adopted as the cumulative standard for 5G standards in the industry.

Fee rates; Scenario 3, from a perspective favorable to Samsung Electronics, Dr. Huang Kun addressed the 2019...

From 2016 to 2023, considering the court rulings that both parties would face when providing their respective business quotations,

The relevant guidelines for the judgment refer to prior cases where the 5G standard industry cumulative fee rate was adopted.

4.341%-5.273%; For 2024-2029, a robustness-based check was adopted.

The verified 5G standard industry cumulative fee rate is 7.8%-8.5%. Further discussion will follow.

When paying the license fee, only the result calculated based on the most conservative scenario three is listed.

Finally, regarding the 5G standard industry cumulative rates applicable to base stations, Dr. Huang Kun

It is argued that previous rulings have not shown that it should be linked to industry accrual fees applicable to end users.

The rates are significantly different, and ZTE and Samsung Electronics have differed in their understanding of the "2024 Agreement".

The licensing negotiations did not specifically address the cumulative fee rate for base station equipment, therefore...

The calculation assumes that the cumulative fee rate for the base station industry is the same as that for the terminal industry.

Second, calculate the strength of ZTE and Samsung Electronics in 5G standard essential patents.

Percentage.

Dr. Huang Kun consulted GreyB, PA Consulting, and Beijing Moqiu.

Patent search deadlines from institutions such as [Organization Name] for 10 [Years] on or after December 31, 2021

This 5G report uses declared essential patent family data and analyzes relevant data from various reports.

## Intellectual Property Finance

The average of the values yields ZTE's percentage of global standard essential patents for 5G.

Samsung Electronics' share of global standard essential patents for 5G is 7.7%, while its share is 8.7%.

Third, determine the value weight of each generation of standards in 5G multi-mode.

Dr. Huang Kun pointed out that currently in the communications industry, there is a lack of understanding regarding the different generations of 5G multi-mode.

There is no unified understanding of the weighting of value. The judgment in the OPPO v. Nokia case was based on this...

The evidence and claims submitted by both parties in the case established the basis for the introduction of 5G technology into smart devices.

In the early stages of the mobile phone industry, the value weighting was 50:40:5:5. However, with the advent of 5G after 2019...

Rapid commercialization and the rapid development of 5G standards were highlighted by Dr. Huang Kun in a public announcement to Ericsson.

Analysis of mobile data traffic revealed that the "2024 Agreement" in this case...

The coverage period to be covered is 2024-2029, focusing on 5G standard features in 5G multi-mode terminal products.

The value weight should not be less than 70%. Therefore, Dr. Huang Kun addressed the 2019 bilateral agreement between the two parties.

- 5G terminal products sold in 2023 were subject to a 50:40:5:5 value weighting.

The agreement applies to 5G terminal products sold by both parties between 2024 and 2029.

The value weight is 70:24:3:3.

Fourth, regarding the regional discount applicable to the specific parties in this case.

Although the percentage of global patents is often used to measure bilateral rights in global licensing negotiations.

The value of the relevant patents is used to determine the global royalty rate, but the specific patents in this case are taken into account.

The patent portfolio of the patent holder and the geographical distribution of production and sales of specific implementers.

Regarding the regional discounts demanded by Samsung Electronics during negotiations and litigation, Huang...

As a further concession, Dr. Kun calculated the applicable rates for ZTE and Samsung Electronics.

Global rates with comprehensive regional discounts. Dr. Huang Kun based his calculations on economic factors and the expertise of both parties.

Based on its strategic layout and production and sales situation, the world is divided into three regions: Region 1

For developed countries and regions with a per capita GDP of \$20,000 or more, the second zone...

The first region is mainland China, and the second region is other developing countries and regions.

## Intellectual Property Finance

According to patent law and previous case law, the patentee's place of production of the product is the place of manufacture for the infringer.

The strength of the patent portfolio determined the lowest global benchmark for the right holder's FRAND licensing fees.

Therefore, Dr. Huang Kun first based his calculations on ZTE Corporation and Samsung Electronics.

The patent strength in the other party's production location determined the minimum standard for the regional adjustment coefficient.

Since the implementer may have multiple production locations, Dr. Huang Kun is concerned about the implementer's production location in a certain production area.

The regional adjustment coefficient for the place of origin is determined by the patentee's patent ownership in a certain place of production by the implementer.

The estimate is made using the formula: ratio ÷ patent holder's global patent share. Then, the implementer...

The weights of production output from different manufacturing locations as a percentage of their global output were used to obtain ZTE's data.

Based on the regional adjustment factor weighted by the production location of Samsung Electronics, Samsung Electronics' base

The regional adjustment factor weighted by ZTE's production location is [value]. This factor is used [reference].

The minimum standard for regional adjustment coefficients. Secondly, because the rights holder has the right to choose...

Claiming licensing fees based on the place of origin or sale as the place of patent implementation is beneficial for the rights holder.

In regions where the seller's patent strength is stronger than that of the production location, Dr. Huang Kun, as the rights holder...

The patent strength in this sales region is used to calculate the regional adjustment factor. For the rights holder...

In regions where the patent strength of the seller is lower than that of the manufacturer, Dr. Huang Kun adopted the previous approach.

The regional adjustment coefficient determined by the production location is used as the benchmark. When determining the implementer...

After adjusting the coefficients for the same sales region, Dr. Huang Kun applied the different sales regions of the implementer.

The sales revenue share was used as the weight to calculate ZTE's performance in the three regions.

The regional adjustment coefficients for the products implemented by Star are respectively [redacted] further

Based on the sales distribution of Samsung Electronics' 5G phones in three regions in 2024...

And given that ZTE is perfecting its global layout, Dr. Huang Kun believes that...

The comprehensive tariff applicable to ZTE's global rates during the licensing period of the 2024 Agreement

The district discount [REDACTED] Meanwhile, using the same method, Dr. Huang Kun also calculated...

Samsung Electronics implemented regional adjustments to its product offerings targeting ZTE in three divisions.

Intellectual Property Finance

The numbers are respectively [REDACTED] Applicable during the license period of the 2024 Agreement.

The combined regional discount for Samsung Electronics' global rates is as [REDACTED].

Fifth, calculate the 5G single-mode and multi-mode fees for ZTE and Samsung Electronics in this case.

Rate.

Regarding the 5G single-mode tariffs of ZTE and Samsung Electronics, Dr. Huang Kun adopted...

The specific calculation formula is: 5G single-mode percentage rate = 5G standard industry cumulative rate  
x5G patent share xComprehensive regional discount. Among them, the 5G single-mode rate is based on...

The following method adopts the most conservative scenario three for the cumulative tariff rate of the 5G standard industry (i.e.

The cumulative industry fee for adopting 5G standards from 4.341% to 5.273% between 2019 and 2023.

Rates and cumulative industry fees for adopting 5G standards from 7.8% to 8.5% between 2024 and 2029.

The rate was estimated using the above formula. Based on this formula, Dr. Huang Kun calculated the ZTE...

The 5G single-mode tariff rate for communications from 2019 to 2023 [REDACTED] 2024

5G single-mode tariff from 2020 to 2029 [REDACTED] Samsung Electronics in 2019

5G single-mode tariff from 2020 to 2023 [REDACTED] 2024-2029

The 5G single-mode rate is [REDACTED]

Regarding the 5G multi-mode rates offered by ZTE and Samsung Electronics, Dr. Huang Kun adopted...

The specific calculation formula is: 5G multi-mode percentage rate = 5G single-mode percentage rate x  
5G standard value weight + 4G multi-mode percentage rate x 2G - 4G standard value weight.

The standard's value weights apply in a 50:40:5:5 ratio for the period 2019-2023.

Value weighting, applying a 70:24:3:3 value weighting for 2024-2029.

Regarding 4G multi-mode pricing, Dr. Huang Kun adopted a conservative approach, referring to the aforementioned "2021..."

The 2024 Agreement, after being broken down and appropriately adjusted, is applicable to the 2024 Agreement.

The agreement covers 2G-4G licensing rates. Furthermore, due to the 2021 agreement between the two parties...

It already covers 4G multi-band 5G terminal products sold between 2019 and 2023.

Intellectual Property Finance

Therefore, the 5G multi-mode rate during 2019-2023 is only the same as the 5G single-mode rate.

The product of the modular fee rate and the 5G standard value weight. Based on the above calculation formula, Huang Kun

The PhD calculated that ZTE's 5G multi-mode tariff rate from 2019 to 2023 was...

[REDACTED] The 5G multi-mode fee rate is projected to be 0.29%-0.32% from 2024 to 2029.

Samsung Electronics' 5G multi-mode tariff rates from 2019 to 2023 [REDACTED]

The 5G multi-mode rate will be 0.40%-0.44% from 2024 to 2029.

Furthermore, regarding the cumulative industry rates for 5G standards under the top-down legal framework, Huang...

Dr. Kun also addressed the "Samsung Electronics Ericsson Agreement" and the "Samsung Electronics Nokia Agreement".

The Samsung Electronics Interactive Digital Protocol was disassembled, and calculations were made based on this.

The three agreements implied the 5G standards that Samsung Electronics and the other parties to the agreements agreed upon.

Industry cumulative rates at [REDACTED] The interval indicates the actual amount paid by Samsung Electronics.

The corresponding 5G standard industry cumulative fee rate is significantly higher than the 4G standard industry cumulative fee rate.

The rate, and this value also supports ZTE's conservative stance on 5G standards in the industry.

Accumulation rate.

(2) Calculation of 5G licensing rates by Dr. Huang Kun using the comparable protocol method

Dr. Huang Kun, within the framework of comparable agreement law, used the "Samsung Electronics Ericsson Agreement" as an example.

The Samsung Electronics-Nokia Agreement and the Samsung Electronics Interoperable Digital Protocol are compatible.

The agreement breaks down the reasonable division of ZTE and Samsung Electronics under the 2024 agreement.

5G licensing fee range.

First, by disassembling the "Samsung Electronics Ericsson Protocol" and "Samsung Electronics Nokia Protocol"...

The "Asia Agreement" and the "Samsung Electronics Interactive Digital Protocol" have been approved by Samsung Electronics under each agreement.

Ericsson, Nokia, and Interactive Digital's actual payment rates for 4G and 5G single-mode services.

Regarding the Samsung Electronics Ericsson Agreement and the Samsung Electronics Nokia Agreement, this

Two agreements [REDACTED]

Intellectual Property Finance [REDACTED]

[REDACTED] Huang Kunbo

After making reasonable assumptions about the proportional relationship between the various license fee rates, based on Canalis, IDC, and Dell'Oro publicly disclosed sales and projected sales for each product.

The revenue breakdown revealed the 5G single-mode fee paid by Samsung Electronics to Ericsson.

[REDACTED] Samsung Electronics paid Nokia a 5G single-mode fee of [amount missing].

[REDACTED] Regarding the Samsung Electronics Interactive Digital Protocol (IDP), this protocol...

for [REDACTED]

[REDACTED] it can be calculated

Samsung Electronics disclosed the actual 5G single-mode fee paid to Interactive Digital. [REDACTED] [REDACTED]

Secondly, calculate the 5G single-mode performance applicable to ZTE under the 2024 agreement.

Fee rates. Although Samsung Electronics' three agreements involve patent packages from other rights holders,

However, all the rights holders in these agreements, along with ZTE Corporation, are industry-leading wireless communication companies.

The patent holders of the standard-essential patents, in conjunction with publicly available data, compare the relative patent packages of both parties.

By making appropriate adjustments to the value, ZTE's 5G single-mode fee rate can be estimated.

## Intellectual Property Finance

Therefore, considering the differences in the proportion of patents held by different rights holders and ZTE Corporation, as well as the three...

The difference between the signing time of the Samsung Electronics agreement and the 2024 agreement, Huang Kun

The doctor made two adjustments: first, the fee rate for Samsung Electronics as the rights holder was adjusted.

Based on the relative patent share between it and ZTE at the time of signing the agreement with Samsung Electronics

Adjustments were made based on the comparison between ZTE Corporation at that time and ZTE Corporation at the present.

The patent percentage was adjusted. Dr. Huang Kun referenced the earlier patent search deadline.

Multiple public reports at the signing dates of each agreement, to obtain Samsung Electronics' agreement details.

The percentage of patents held by the right holder.

Furthermore, due to Ericsson, Nokia, ZTE, and Samsung Electronics

The patent true necessity rate is roughly equivalent to the industry average, regardless of whether it adopts sound

The conclusions drawn from the proportion of essential patents and the proportion of truly essential patents are basically the same.

Similarly, Dr. Huang Kun adopted the approach used in the agreements between Samsung Electronics and Ericsson and Nokia. [REDACTED]

[REDACTED] The final calculation is based on the Samsung Electronics-Ericsson agreement.

The disassembled ZTE 5G single-mode tariff rate is [REDACTED] Samsung Electronics 5G single

The mold fee rate is [REDACTED] Disassembly based on the Samsung Electronics-Nokia Agreement

ZTE's 5G single-mode fee rate [REDACTED] Samsung Electronics 5G Single-Mode Rates

for [REDACTED]

[REDACTED] Dr. Huang Kun adopted the Samsung Electronics Interactive Digital Protocol. [REDACTED]

The disassembled ZTE 5G single-mode tariff rate and Samsung [REDACTED] 5G single-mode tariff rate are shown below.

for. [REDACTED]

Based on this, regarding the 5G rates between ZTE and Samsung Electronics in this case,

Dr. Huang Kun further conservatively applied the previously calculated comprehensive data for ZTE Corporation.

Regional discounts of Samsung Electronics' comprehensive regional discounts were obtained based on

Intellectual Property Finance

The breakdown of the Samsung Electronics-Ericsson agreement reveals ZTE's 5G single-mode tariff rate.

Samsung Electronics' 5G single-mode tariff is based on

The breakdown of the Samsung Electronics-Nokia agreement reveals ZTE's 5G single-mode tariff rate.

Samsung Electronics' 5G single-mode tariff is based on

The breakdown of Samsung Electronics' Interactive Digital Protocol (IDP) reveals ZTE's 5G single-mode tariff rate.

Samsung Electronics' 5G single-mode fee rate is...

3. Dr. Huang Kun's calculations regarding Samsung Electronics' relationship with China under the 2024 agreement.

Reasonable range of net license fees for Xingtong Communications

Dr. Huang Kun discussed the 4G multi-mode terminal equipment covered under the 2024 Agreement.

The 4G multi-mode tariff is based on the breakdown of the 2021 agreement; for 5G...

The 5G portion of multi-mode terminal equipment adopts a top-down approach or a comparable protocol.

The estimated 5G single-mode tariff, for 2G-4G components in 5G multi-mode terminal devices.

The pricing structure will still conservatively adopt the 4G multi-mode rates derived from the breakdown of the 2021 agreement;

For 4G base station equipment covered under the 2024 Agreement, the 2021 Agreement shall be adopted.

The 4G single-mode tariff rate is derived from the breakdown of the "Annual Agreement"; for 5G base station equipment, the tariff rate is adopted.

5G single-mode rates estimated based on top-down or comparable protocol methods.

(1) 4G licensing rates calculated by combining the analysis of the 2021 Agreement

Compared to the 5G licensing rates calculated using a top-down method, Samsung Electronics' 2024 licensing fees are calculated accordingly.

The reasonable range of net license fees paid to ZTE under the annual agreement

Dr. Huang Kun adopted the following approach regarding the sales revenue covered under the 2024 Agreement:

Actual data from Canalys, IDC, and Dell'Oro estimated the combined 2019 figures for both companies.

- Sales revenue of 4G and 5G terminal equipment and base station equipment generated during 2024.

It also uses future total market sales forecasts provided by Canalys and Dell'Oro.

Assuming that the market share of each product of both parties remains the same as in 2024, we obtain...

## Intellectual Property Finance

The sales figures for each company's products from 2025 to 2029 were projected. This included sales of mobile terminals.

Regarding the equipment, Dr. Huang Kun used 75% of the data collected from Canalys.

The retail price of the device is converted into the net selling price of the phone, and from a perspective that benefits Samsung Electronics,

A cap of \$400 per unit was set on the net selling price of mobile phones; for non-mobile terminal devices...

However, since the available Canalys data does not include non-mobile terminal devices,

Dr. Huang Kun referenced data from IDC statistics on wearable products and laptops from both parties.

Total sales of products and tablet computers during the period from 2019 to the second quarter of 2024

The ratio of sales revenue to the total mobile phone sales revenue of both parties during the same period.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

), and then multiply it by Canalys

The data statistics for both parties, adjusted for net selling price and capped selling price, from 2019 to 2024.

The estimated sales figures for the mobile phones were calculated. Considering that it is currently the end of 2025, Huang...

Dr. Kun calculated the present value of the sales revenue of both parties, discounted to 2025, and the present value of future years.

The rate is set at 10% based on prior judgments, and interest will not be accrued on past licensing fees (sales revenue) for the time being.

(See the table below for data).

|  | Product Type | 2019-2023 | 2024-2028 | 2029 |  |
|--|--------------|-----------|-----------|------|--|
|--|--------------|-----------|-----------|------|--|

Intellectual Property Finance

|                     |                      |  |
|---------------------|----------------------|--|
| Samsung Electronics | 5G terminal products |  |
|                     | 4G terminal products |  |
|                     | 5G base station      |  |
|                     | 4G base station      |  |
| ZTE Corporation     | 5G terminal products |  |
|                     | 4G terminal products |  |
|                     | 5G base station      |  |
|                     | 4G base station      |  |

Based on the sales data mentioned above, Dr. Huang Kun analyzed the "2021" report.

The agreement was revised and adjusted to reach a 4G global agreement between the two parties for the 2024 agreement.


The fee rate calculates the 4G one-way license fees payable by each party from 2024 to 2029.

Fees are calculated in segments based on the global 5G rates for both parties, derived using a top-down approach.

The respective 5G payments payable by both parties for 2019-2023 and 2024-2029 were agreed upon.

One-way licensing fee. Ultimately, under this method, Dr. Huang Kun obtained a license from Samsung Electronics.

The licensed products sold between 2019 and 2028 under the 2024 Agreement in this case.

The net licensing fee payable to ZTE is one million US dollars. 

Additional net license fees payable to ZTE for licensed products sold in 2029

It am  lions of dollars.

(2) 4G licensing rates calculated by combining the analysis of the 2021 Agreement

Compared to the 5G licensing rates calculated using the comparable agreement method, Samsung Electronics' 5G licensing rates under the 2024 Agreement are calculated accordingly.

The reasonable range of net license fees paid to ZTE under the annual agreement

Intellectual Property Finance

Similarly, based on the aforementioned sales data, Dr. Huang Kun also utilized disassembly...

The 2021 Agreement, adjusted by both parties, resulted in the agreement for the 2024 Agreement.

4G global rates, calculating the 4G fees payable by each party from 2024 to 2029.

One-way licensing fees, and estimates of both parties' 5G costs by dismantling three agreements with Samsung Electronics.

Global rates were calculated in segments for 2019-2023 and 2024-2029.

Each party should pay its own 5G one-way license fee. Ultimately, under this method, Huang Kunbo...

The company obtained a contract from Samsung Electronics under the 2024 Agreement for the period from 2019 to 2028.

The net license fee payable to ZTE for licensed products sold through intermediaries should be at least [amount missing].

██████████ One million US dollars should be paid to China for licensed products sold in 2029.

The additional net license fee paid by Xingtong is at least ██████████ Millions of dollars.

(II) Dr. Deng Fei's rebuttal regarding Dr. Huang Kun's calculation method, with

And Dr. Huang Kun's response

1. Dr. Deng Fei's comments on Dr. Huang Kun's top-down method for calculating 5G rates

rebuttal

Dr. Deng Fei believes that Dr. Huang Kun's use of a top-down approach in this case is flawed.

The wrong method was chosen, and there were errors in the specific calculation process, leading to the final analysis being flawed.

The results are unreliable. The main objections are as follows:

First, in the presence of clearly comparable prior agreements.

The more applicable economic approach in this case is the comparable agreement approach, while the top-down approach is at most...

The calculation results should be used as supplementary references and should not be directly applied as the applicable FRAND in this case.

License fee.

Second, Dr. Huang Kun incorrectly used the hedonic price regression model to calculate...

The calculation process and results of the 5G standard industry cumulative fee rate also have problems.

First, the industry's cumulative fee rate is formed based on industry consensus and is a relatively fixed rate.

## Intellectual Property Finance

A given value or range of values cannot be derived from a single license agreement, and

The value of patents varies greatly among different rights holders, and a single licensing agreement can only reflect a specific patent.

The market value of a patent held by a patent holder cannot be used to infer the overall patent value of the industry.

Using licensing agreements reached by individual entities to infer industry-recognized cumulative licensing rates

The method is unscientific. Secondly, the industry cumulative fee rate is a cap on license fees.

The "price-based" commitment, as reflected in Dr. Huang Kun's calculations based on the hedonic price regression model, demonstrates...

The "post-hoc" value includes the added value from the 5G standard hijacking effect, and even according to the facts...

Subsequent contribution estimation should also measure the contribution to profit, not the contribution to price.

Furthermore, Dr. Huang Kun attributed the entire 5G premium to the value created by patented technology, and all of it...

The feedback to patent holders has led to an overestimation of the cumulative industry rates for 5G standards. (Huang Kun)

The PhD student's calculations regarding the premium brought by the 5G standard also contained errors.

Errors led to excessively high cumulative industry rates for 5G standards in calculation and use, which is inconsistent with 5G standards.

The promises made by the main rights holders in the early stages of quasi-commercialization were not matched.

Third, the calculation results of Dr. Huang Kun's eigenvalue regression model have obvious flaws.

There are obvious problems. First, the model as a whole lacks robustness. Dr. Huang Kun's work on feature pricing...

The regression model only added one new variable, "processor model," and the 5G coefficient estimation results are as follows.

The result decreased from 21.57% to 13.83%, and this added variable led to a decline in the robustness test results.

The results differ significantly from the original results of the benchmark model. Secondly, the model calculation results correspond to...

The periodicity is questionable. In the characteristic regression model calculation formula used by Dr. Huang Kun...

This involves two key parameters: the 5G coefficient and the ratio of the average selling price of 4G and 5G.

The former uses mobile phone price data up to the first quarter of 2025, while...

The latter uses the average selling price of mobile phones from 2019 to 2029. Different years

The degree of fluctuation is large, which drastically affects the calculation results of the cumulative fee rate for the 5G standard industry.

Fourth, Dr. Deng Fei, based on the global overall patent family proportion and specific regional patents...

## Intellectual Property Finance

The breakdown of the Lizu agreement involved the "2021 Agreement," the "Samsung Electronics Datang Agreement," and the "Three..."

Star Electronics Multicom Agreement [REDACTED] and Samsung Electronics

The NEC Agreement, based on the implied industry accumulation calculated from the global overall patent family share.

The license fee rate is [REDACTED]

The implied cumulative licensing fee rate calculated based on the proportion of patent families in a specific region is...

[REDACTED]

[REDACTED] The above results are consistent with Dr. Huang Kun's findings regarding the 5G standards industry.

There is a significant discrepancy in the claims regarding the contribution rate. Furthermore, the plaintiff and defendant have differing opinions on their respective chosen contribution rates.

Implicit industry cumulative licenses derived from the breakdown of agreements between Samsung Electronics and various rights holders

However, the rates vary considerably, while the industry-cumulative license fee rate used in the top-down approach...

Given that the values should be within a relatively fixed range, the significant differences in these results are sufficient to illustrate...

The implied industry cumulative fee rate calculated in the specific agreement is not equivalent to that in the top-down approach.

The industry cumulative rate used.

Fifth, the value corresponding to the global industry cumulative fee rate refers to all globally...

The value of standardized patented technology, and the value corresponding to licensing fees, refers to the value of the patent rights.

The value of standardized patented technologies that individuals actually own and can charge for, therefore,

A patent holder can only obtain [benefits] if they have a patent and have been granted permission in that region or country.

Only with appropriate protection can one have the right to charge fees. Dr. Huang Kun's calculations regarding regional adjustment systems...

When calculating regional patent strength, the total number of industry regional patent families is incorrectly used.

Using the total number of non-industry global patent families as the denominator leads to an inaccurate calculation of regional patent strength.

The force and regional adjustment coefficient results are too high.

2. Dr. Huang Kun's response to Dr. Deng Fei's objection to the top-down method for calculating 5G rates

Response to objections

Dr. Huang Kun responded by saying:

Intellectual Property Finance

First, both the comparable agreement method and the top-down method are essential patents for estimating standards.

Common methods for calculating FRAND rates; the specific choice and application of either method depends on the specific circumstances of the case.

Depending on the specific context and the evidence on file, the top-down approach is not merely an auxiliary method.

reference.

Second, the robustness test of the hedonic price regression model is conducted from a conservative perspective.

The degree adds a "processor model" variable, thereby controlling the inclusion of other processors in the model.

Processor-related variables (such as processor manufacturer, processor speed, number of processor cores)

Even now, factors that are still beyond our control and cannot be observed due to the processor model itself can affect our opponents.

The impact of handset pricing differs from the 5G coefficient calculated using the benchmark model.

The difference is the result after the variable has changed. This has been verified in the "Processing" section of Canals data.

In the "Processor Model" field, approximately 93% of processor model numbers already indicate the model itself.

Whether the processor and the corresponding mobile phone support 5G technology, therefore 5G is already included in the model.

When dealing with dummy variables, it's advisable not to include them in the regression variables, i.e., the benchmark.

Model specification. In short, robustness checks are themselves the most reliable measures for 5G coefficients.

Maintaining an estimate. To put it another way, if Dr. Deng Fei believes that this characteristic price regression model...

The variables are problematic, given that Samsung Electronics had already obtained relevant information from ZTE.

Economic reports can also access data from databases such as IDC, which are fully capable of providing economic data.

Calculate the time allotted and raise substantive questions based on that calculation.

Third, Dr. Deng Fei's assessment of the value of "post-hoc" calculations may include hijacking.

The claim of price increases due to effects has no factual basis, and the premium estimated by the hedonic pricing model is...

The price is the incremental price that mobile phone manufacturers can charge consumers because of the adoption of 5G technology.

The value involves the relationship between mobile phone manufacturers and consumers, and is related to the relationship between the patent holder and the actual user.

The hijacking effect of the perpetrator-employer relationship is not directly related. Furthermore, standard essential patent licensing...

Fees are a type of cost, and it is argued that they should be directly linked to the implementer's profit.

## Intellectual Property Finance

Linking the issue could lead to the implementer adjusting their accounting profit to a negative value, thereby refusing the offer.

Payment of license fees.

Fourth, the 5G standard was formed through contributions from all standard-essential patent holders.

It is reasonable to return its value to the patentee, especially considering its robustness.

The tested industry cumulative fee rate of 7.8%-8.5% for 5G standards is already the maximum it can achieve.

The resulting rate after concessions, in itself, reflects to some extent...

Compromises by standard essential patent holders regarding the 5G premium (5G factor).

Fifth, although some companies or organizations have accumulated fees for 5G standards in the industry.

The recommendation that "the rate should not exceed the cumulative rate of the 4G standard industry" is advocacy, but these suggestions...

The agreement itself has no legal binding force. Moreover, robustness tests have yielded...

The 7.8%-8.5% cumulative fee rate for 5G standards is not higher than the internationally recognized rate.

The 6%-10% standard industry cumulative fee rate for 4G is more in line with the widely adopted judicial practice.

There is also overlap between the conservative 6%-8% cumulative fee rate for 4G standard industries.

Sixth, when assessing regional patent strength, Dr. Deng Fei included the total number of global patent families.

With the number as the denominator and the total number of regional patent families of the patentee as the numerator, the following will occur:

The error of mismatched numerator and denominator greatly underestimates the rights holder's influence in the region.

Patent strength. Assuming Dr. Deng Fei believes that using the total number of global patent families as the denominator is...

Because we need to consider the value of all technologies (i.e., even if some technologies are in a particular country)

Even if a region does not obtain patent protection, the corresponding licenses for these technologies should still be retained.

Similarly, the molecule should also consider all the technology owned by the patentee (including the patentee's share of the cost).

The value of technologies that have not yet been patented in a particular country or region.

In this case, based on Dr. Deng Fei's logic, the numerator and denominator are further unified.

When using this scale, the actual calculated regional patent share equals the global patent share. For example...

If Dr. Deng Fei wants to focus on technologies that are patented in a certain region or country, then...

## Intellectual Property Finance

The numerator and denominator used when calculating regional patent strength should also have a unified standard, that is...

The numerator is the number of patent families held by the patent holder in a certain region or country, and the denominator is the number of patents held by the patent holder within the industry.

The number of patent families held by a right holder in a particular region or country. Furthermore, to put it another way, in...

Dr. Deng Fei used regional weighting methods of different scales for the numerator and denominator, taking into account...

It is objectively impossible for patent holders to apply for patents in every region and country worldwide.

This will result in all patent holders having a regionally weighted patent share that is approximately equal to their global patent share.

The profit share is around 20%-30%, which means that all patent holders only receive about 20%-30% of the industry's cumulative profits.

The cumulative fee rate is around 20%-30%, which aligns with the generally accepted industry connotation and meaning of cumulative fee rates.

There is a clear conflict of opinion, which is sufficient to illustrate Dr. Deng Fei's statement regarding the strengthening of regional patent power.

There are obvious problems with the weighting calculation. Furthermore, Dr. Deng Fei did not perform the regional weighting.

There is consideration of using the place of production as the minimum standard.

### 3. Dr. Deng Fei's comments regarding Dr. Huang Kun's use of the 2021 Agreement to calculate 4G

Rates and utilization of the Samsung Electronics-Ericsson Agreement and the Samsung Electronics-Nokia Agreement

And a rebuttal to Samsung Electronics' Interoperability Digital Protocol (IDP) for calculating 5G rates.

Regarding Dr. Huang Kun's calculations of the 2024 agreement based on the 2021 agreement...

The licensing fees for the transition from 2G to 4G are based on agreements between Samsung Electronics, Ericsson, and Nokia.

Using the protocol for interactive digital communication as a comparable protocol, we can extrapolate 5G under the 2024 protocol.

Regarding the partial licensing fee approach, Dr. Deng Fei's main objection is as follows:

First, Dr. Huang Kun incorrectly determined the total net licensing fee of the 2021 Agreement.

The amount corresponds only to sales by both parties from 2021 to 2023 and does not include any 5G projects.

The licensing of quasi-essential patents, leading to the extrapolated licensing of the 2G to 4G segments.

The rates are too high.

Second, ZTE is the net licensor in this cross-licensing case, and in the context of the two parties...

There exists a "2021 Agreement" and licenses signed by ZTE and other implementers.

Intellectual Property Finance

Where an agreement can be reached, Samsung Electronics, as the implementer, will sign agreements with other patent holders.

The patent licensing agreement is not clearly related to this case, as it reflects other...

The licensing value of the patent holder's patent portfolio, not ZTE's patent portfolio.

Value. And the Samsung Electronics Interoperable Digital Protocol and the Samsung Electronics Ericsson Protocol.

The Samsung Electronics-Nokia Agreement was reached under actual pressure from litigation or arbitration.

The agreements reached under duress were subject to widespread litigation pressure and bans for Samsung Electronics.

The threat stems from patent portfolio licensing fees that fail to reflect free market value, therefore...

The agreements between Samsung Electronics and Ericsson, Nokia, and InterDigital are not relevant to this case.

Comparability.

Third, Dr. Huang Kun dismantles the cooperation between Samsung Electronics and Ericsson and Nokia.

During the meeting

Therefore, Dr. Huang Kun

The dismantling of these three agreements fails to reflect [the true nature of the situation]

Fourth, the patent used by Dr. Huang Kun in disassembling the three agreements from Samsung Electronics.

All percentage parameters are

Furthermore, Dr. Huang Kun based his work on...

Disassembly also exists

The incorrect assumptions led to a significantly higher decomposition result.

Fifth, when Dr. Huang Kun compiled statistics on the patent strength of various entities, he based it on a certain...

The patent share from multiple publicly available reports prior to a certain point in time was averaged to obtain...

While the number of reports and the amount of data used to assess the patent strength of different entities are relevant, the methods employed vary.

The entities issuing the reports and the timing of their issuance are significantly different.

## Intellectual Property Finance

Sixth, compared to Huawei's publicly announced 5G pricing ceiling of \$2.5 per unit,

Following Dr. Huang Kun's calculation method, the capped price of 5G phones is set at \$400.

Yuan/unit, which translates to the percentage fee corresponding to Huawei's publicly disclosed 5G unit fee cap.

The rate is 0.63%, and this rate, after being converted based on the proportion of patents, is far lower than that of Dr. Huang Kun.

The breakdown of 5G rates from Ericsson, Nokia, and Interactive Digital, therefore, Huang Kun

The fees charged by the PhD for dismantling the three agreements were significantly higher than reasonable and should not be considered in this case.

A comparable reference.

4. Dr. Huang Kun's response to Dr. Deng Fei's rebuttal regarding the comparable agreement law.

answer

Dr. Huang Kun responded by saying:

First, based on Dr. Deng Fei's previous exemptions under the 2021 Agreement...

The way the economic value is broken down will result in a significantly lower cumulative 4G license fee rate.

This deviates significantly from the widely accepted range of 6%-8% in judicial practice.

Second, there is no agreement in the evidence presented in this case that can be used to estimate ZTE's value.

In the event of comparable 5G tariff agreements, Samsung Electronics, as the implementer, and other parties...

Agreements signed by the rights holders covering essential 5G standard patents also have reference value.

ZTE is a valuable company, and along with Ericsson, Nokia, and InterDigital, it is a leader in the industry.

Patent holders with a significant share of patents.

Third, the arbitration award reached between Samsung Electronics and Interactive Digital was based on the mutual consent of both parties.

This is based on the premise that it is highly consistent with the voluntary nature of free negotiation, and there is no [issue] in the arbitration process.

Pressure from the ban.

Fourth, regarding the "Samsung Electronics-Ericsson Agreement," it was Samsung Electronics that...

Samsung Electronics was the first to obtain a preliminary injunction in its lawsuit against Ericsson, and Samsung Electronics and...

Ericsson has numerous lawsuits against each other, while Samsung Electronics has not faced any unilateral infringement lawsuits.

## Intellectual Property Finance

And the threat of a ban.

Fifth, in negotiations on licensing essential patents for wireless communication standards, the focus is usually on...

Regarding the value of essential patents for wireless communication standards, Dr. Deng Fei analyzed the "2021..."

Similar considerations were also made when the "Agreement" and the "ZTE-Apple 2020 Agreement" were signed.

Estimated consideration for non-wireless communication standard essential patents

[REDACTED]

Sixth, the fee rate stated in the agreement or publicly declared by the rights holder reflects the agreement's signing date.

The valuation of a patent portfolio by the client or rights holder. When the rights holder declares multiple...

When calculating intergenerational rates, it can be reasonably assumed that the ratio of rates across generations reflects the rights holder's perception of the rights.

Assessment of the relative value of its different generations of patent packages. ZTE assumes these rates.

The proportional relationship reflected in the relationship between the actual fee rates collected by the rights holders across different generations is as follows:

It is reasonable to reach an agreement and dismantle the agreement based on this.

Seventh, ZTE obtained the data through disassembly based on the "Samsung Electronics-Nokia Agreement".

of [REDACTED]

[REDACTED] In fact, based on Huawei's statement

The \$2.50/unit 5G license fee, considering ZTE and Huawei's proprietary technology...

## Intellectual Property Finance

After accounting for the difference in competitive advantage, ZTE can collect approximately 1.25 per unit as a licensing fee.

The price is in US dollars per unit, far exceeding the per-unit rate reflected in ZTE's quotation.

(III) Dr. Deng Fei's method of calculating licensing fees

Dr. Deng Fei argues that the comparable agreement method is the best approach suitable for this case.

Based on the licensing negotiation environment, the similarity of the market position of the licensor, and the similarity of the licensed patents.

Considering similarities and the similarity of licensing terms, Dr. Deng Fei believes that the 2021 Agreement...

The agreement is the most directly relevant comparable agreement in this case. Dr. Deng Fei analyzes it.

The 2021 agreement calculated the amount ZTE could charge Samsung Electronics.

The scope of licensing fees. At the same time, Dr. Deng Fei also dissected and analyzed the ZTE Corporation's Apple...

The "2020 Agreement" and the "Samsung Electronics Datang Agreement" serve as evidence based on the "2021 Agreement".

The rationality of the economic analysis results of the "Annual Agreement"; dismantling the "Samsung Electronics China Agreement".

The agreement serves as evidence of Samsung Electronics' latest offer. [REDACTED] The rationality of it.

1. Dr. Deng Fei's analysis of the 2021 Agreement using the comparable agreement method.

License fee calculation

Dr. Deng Fei believes that the licensed patents under the 2021 Agreement include 2G to...

Among the 4G standard essential patents and 5G standard essential patents, those simultaneously declared as 4G and 5G...

The following generation of standard-essential patents, as well as other standard-essential and non-standard-essential patents

However, because both parties focused only on the necessary proprietary technology for wireless communication standards during the licensing negotiations, the situation remains complex.

The value of other patents was not discussed, therefore it is speculated that the value of other patents is relative to the value of none.

The value of standard essential patents for wired communication is relatively low, and they may be subject to cross-licensing.

They cancel each other out; therefore, Dr. Deng Fei only considered the absence of mutual liability in his economic analysis.

Regarding the essential patents for wired communication standards. As for other key clauses, Dr. Deng Fei's...

The analysis is based on the fact that the license period of the 2021 Agreement should be considered as January 1, 2021.

The period is until December 31, 2024 (four years), and covers the period since 2013.

## Intellectual Property Finance

Previous sales. Licensed products cover all mobile devices and infrastructure of both parties.

The licensed product will be provided, but will not include the "pure 5G functionality" portion. (ZTE Corporation)

The licensing fee revenue obtained from the 2021 Agreement is [REDACTED] Yuan.

Dr. Deng Fei extrapolated the 2024 agreement from the 2021 agreement.

The formula used to calculate the reasonable licensing fee is as follows:

$$\frac{\text{新协议净许可费总额}}{\text{旧协议净许可费总额}} = \underbrace{\frac{\text{中兴专利实力}_{\text{新}}}{\text{中兴专利实力}_{\text{旧}}}}_{\text{调整因子一}} \times \underbrace{\frac{\text{三星被许可销售收入}_{\text{新}} - \frac{\text{三星专利实力}_{\text{新}}}{\text{中兴专利实力}_{\text{新}}} \times \text{中兴被许可销售收入}_{\text{新}}}{\text{三星被许可销售收入}_{\text{旧}} - \frac{\text{三星专利实力}_{\text{旧}}}{\text{中兴专利实力}_{\text{旧}}} \times \text{中兴被许可销售收入}_{\text{旧}}}}_{\text{调整因子二}}$$

Adjustment factor one is the patent strength adjustment factor, and adjustment factor two is the sales revenue.

Add adjustment factor.

Regarding the patent strength adjustment factor, Dr. Deng Fei believes that due to the old and new agreements...

The overlap among licensed patents is very high, and patents held by the same patentee are of similar value.

They often exhibit a certain degree of continuity, therefore it is possible to infer the nature of ZTE's patent portfolio.

The ratio of unit value to industry average unit value between new and old agreements.

No significant changes have occurred, therefore ZTE (net charger)'s dedicated...

The patent portfolio share ratio serves as a measure of a company's strength in essential patents for wireless communication standards.

Regarding the sales revenue adjustment factor, it refers to the cross-licensing offsets covered by the new and old agreements.

The ratio of Samsung Electronics' (net payer) licensed product sales revenue after deductions.

Regarding the strength of both parties' essential patents for wireless communication standards, Dr. Deng Fei believes that...

Considering the patentee's wireless communication standards corresponding to the sales distribution of the licensee's products

Essential patent strength. Dr. Deng Fei calculated the essential patent strength of both parties' wireless communication standards.

The process involves three steps: First, calculating the regional patent strength after adjustment.

Global patent strength across generations, namely, the essential patents required for wireless communication standards by the patent holder.

## Intellectual Property Finance

The distribution of benefits in various countries or regions around the world and the various licensed products of the licensees.

Based on the sales distribution across countries or regions, calculate the corresponding types of licensees for each licensee.

The product sales distribution is applicable to various generations of licensed products.

Share of essential patent families in communication standards, taking Samsung Electronics' licensed products as an example.

The calculation formula applies to the sales distribution of Samsung Electronics licensed products  $m$  in  $N$  regions.

ZTE's weighted essential patent share for wireless communication standards is:

$$\sum_{n=1}^N (\text{中兴通讯在地区 } n \text{ 的蜂窝标准必要专利族份额} \times \text{被许可产品 } m \text{ 全球销售总收入中地区 } n \text{ 的占比})$$

The second step is to calculate the multi-mode weighted weights applicable to all types of licensed products.

The product's global patent strength, which is determined by the weighting of each generation of standards in multi-mode products.

The calculation results from the first step are further applied to multi-mode products, using Samsung Electronics'...

Taking 4G multi-mode products as an example, ZTE's products are compatible with Samsung Electronics' 4G multi-mode products.

The share of essential patent families for wireless communication standards is:

$$\sum_{2G}^{4G} (\text{适用于三星电子公司 } 4G \text{ 多模产品销售分布的中兴通讯公司各代际标准必要专利族份额} \times \text{对应代际标准在 } 4G \text{ 多模产品中的权重})$$

The third step is to calculate the weighted average sales of licensed products by category and generation.

"Hybrid" global patent strength, meaning that based on the various types of patents held by the licensee during the agreement period...

The proportion of sales revenue from the products can be further summarized into applicable data from the second step.

The total sales revenue of the licensed products during the licensee agreement period, subject to regional patents

Samsung Electronics' adjusted share of standard essential patent families for wireless communications also reflects this.

Taking ZTE's licensed products as an example, ZTE's "hybrid" wireless communication standard must

The share of the patent family is:

$$\sum_{m=1}^M (\text{适用于三星电子公司被许可产品 } m \text{ 的中兴通讯蜂窝通信标准必要专利族份额} \times \text{三星全部被许可产品的全球销售总收入中产品 } m \text{ 的占比})$$

## Intellectual Property Finance

Therefore, Dr. Deng Fei conducted research based on the IPlytics and PatBase databases.

The adjustments included regional patent strength and multi-mode weighting, and were made according to categories and generations.

After weighting the sales of licensed products, the necessary wireless communication standards of both parties were obtained.

Patent strength refers to ZTE's global patent strength corresponding to the 2021 Agreement.

for [REDACTED] Samsung Electronics' global patent strength is [REDACTED]

The global patent strength of ZTE Corporation corresponding to the "2024 Agreement" is: [REDACTED]

[REDACTED] Samsung Electronics' global patent strength is [REDACTED] in conducting multiple

When adjusting the modulus weights, Dr. Deng Fei used the following parameters during the 2021 Agreement period.

In 3G multi-mode products, the weights of 3G and 2G are 67% and 33%, respectively, while in 4G multi-mode products...

In 4G, 3G, and 2G, the weights are 70%, 20%, and 10%, respectively. In 5G multi-mode products, 5G...

The weights for 4G, 3G, and 2G are 50%, 40%, 5%, and 5%, respectively. (This is in the 2024 Agreement.)

Correspondingly, from 2025 to 2029, Dr. Deng Fei will focus on 4G in 4G multi-mode products.

The weighting has been further increased, with 4G and 3G now accounting for 90% and 10% respectively, while 5G will be given more weight.

The weight of 5G in multi-mode products has been further increased, adjusted to a weighting of 5G, 4G, and 3G.

The weights are 80%, 10%, and 10%.

Regarding the sales revenue of the licensed products between the two parties, Dr. Deng Fei used IDC (Internet Data Center) as a reference.

The company's data analysis and forecasts for both parties' mobile phone, tablet, and smartwatch products

The sales revenue, and adjusted retail prices based on data from TechInsights.

The ratio of wholesale price to retail price for Samsung Electronics and ZTE is as follows:

The figures are 71% and 74%, respectively. [REDACTED]

[REDACTED] And adopt Dell'Oro

The company compiled and predicted the base station sales revenue for both parties. In addition, Deng Feibo...

The company used an annual discount rate of 10% to discount sales revenue to the date of license signing.

Ultimately, Dr. Deng Fei obtained the license from Samsung Electronics covered by the 2021 Agreement.

Intellectual Property Finance

The total sales revenue of the product was [REDACTED] ZTE's licensed products

Total sales revenue was [REDACTED] Samsung covered by the 2024 agreement

Total sales revenue of licensed electronic products was [REDACTED] ZTE Corporation was

Total sales revenue of licensed products was [REDACTED]

Dr. Deng Fei ultimately calculated the adjustment factor to be 1. [REDACTED], adjust

Integer factor two is [REDACTED] Further calculations yielded the results of the 2024 agreement.

The total net license fee is [REDACTED]

[REDACTED] Samsung Electronics responded to ZTE.

The one-way license fee payable for communication is [REDACTED] middle

The one-way licensing fee that ZTE should pay to Samsung Electronics is [REDACTED]

[REDACTED]

Dr. Deng Fei also based his analysis on a coarser partitioning method (China Mainland, the United States, ...

Europe, India, South Korea, and other regions) and based on global overall patent family share.

Robustness tests were conducted, and the total net license fee corresponding to the 2024 Agreement was obtained.

The amounts are respectively [REDACTED] use

This is to demonstrate the robustness of the above calculation results.

Due to disagreements between the two parties regarding the interpretation of the 2021 Agreement, Deng Feibo

The engineer further performed supplementary calculations based on different settings: Supplementary setting one is permission.

The term is from 2021 to 2024, with past sales calculated from 2015 onwards; supplementary provisions are provided.

The second provision stipulates that the license period is from 2021 to 2023, and previous sales must be made since 2013.

Calculation; Supplementary setting three: the license period is from 2021 to 2023, past sales...

Calculated from 2015. Based on the proportion of patent families in specific regions and the overall global patent portfolio.

Based on ethnic proportions, Dr. Deng Fei calculated the following supplementary settings for the 2024 Agreement.

The total net license fee is [REDACTED] Replenish

The total net license fee under the 2024 Agreement is set at... [REDACTED]

[REDACTED] Supplementary setting three net allowances under the 2024 Agreement

The total amount of fees is [REDACTED]

2. Dr. Deng Fei used the comparable protocol method to dissect ZTE's 2020 Apple product.

The agreement and the Samsung Electronics Datang agreement serve as evidence for the dismantling of the 2021 agreement.

Calculation of results

Dr. Deng Fei believes that the 2021 agreement between ZTE and Samsung Electronics...

This is the most directly comparable agreement to this case. For reference to other agreements,

The market value of ZTE's 4G and 5G patent portfolio should also be referenced.

The dismantling of the "Apple Communications Agreement 2020" and its comparison with the "2021 Agreement" reveals...

The disassembly results were similar, further proving that the "2021 Agreement" reflected ZTE's commitment to the agreement.

The market value of communications licenses. Even if Samsung Electronics signs agreements with other patent holders...

The agreement should be taken into consideration, and priority should be given to referencing Chinese companies that are similar to ZTE.

Agreements between patent holders.

Dr. Deng Fei believes that because the "ZTE-Apple 2020 Agreement" also violates...

This reflects the market value of ZTE's 4G and 5G patent portfolio, therefore, the "ZTE..."

The "Apple 2020 Communication Agreement" also has some reference value, and Dr. Deng Fei...

Assuming that the value of each patent family of ZTE and Apple is equal, the breakdown is as follows:

ZTE's one-way license fee rate [REDACTED] assuming ZTE Corporation...

The value of the unit patent family corresponding to the ZTE-Apple 2020 Agreement and

Price per patent family corresponding to the 2024 agreement between ZTE and Samsung Electronics

Assuming equal values, ZTE's patent family is subject to the 2024 Agreement.

The ZTE patent family corresponding to the "ZTE-Apple 2020 Agreement"

The ratio of the amounts is used to calculate the ZTE one-way allowance applicable to the 2024 agreement.

Intellectual Property Finance

The license fee rate is [REDACTED] further assuming Samsung Electronics and ZTE...

The patent families of the communication units are of equal value, and the applicable value under the 2024 Agreement is calculated.

Samsung Electronics' one-way licensing fee rate is [REDACTED] Ultimately, Dr. Deng Fei

Calculations based on the breakdown of the "ZTE-Apple 2020 Agreement" show that in 2024...

The total net license fee corresponding to the annual agreement is [REDACTED]

[REDACTED]

[REDACTED]

Dr. Deng Fei further believes that, since ZTE and Datang are both Chinese companies...

Liren and its patent portfolios have similar geographical distributions, and both focus their R&D on wireless communication.

Infrastructure technology, therefore it is reasonable to speculate that ZTE and Datang are targeting Samsung Electronics.

The licensing values of the two are quite similar. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. Dr. Deng Fei disassembles the "Samsung Electronics-Huawei Agreement" to corroborate Samsung Electronics' claims.

Latest Price [REDACTED] rationality

Dr. Deng Fei also disassembled the "Three-Party Agreement" signed between Samsung Electronics and Huawei in 2022.

"Star Electronics Huawei Agreement". Dr. Deng Fei believes that, considering Huawei's wireless...

The number of standard-essential patents for communications is significantly higher than that of ZTE, especially for 5G standard-essential patents.

In terms of patents, the licensing value of Huawei's individual patent families may be higher than that of ZTE.

Therefore, Dr. Deng Fei conservatively assumed that Huawei and ZTE's patents were involved in the disassembly process.

The licensing value of the families is roughly equivalent, and this setting may overestimate the necessity of ZTE's standard.

The value of the patent family's licensing to Samsung Electronics should be considered, therefore the teardown results should not be directly...

## Intellectual Property Finance

As the net license fee under the 2024 Agreement in this case, and only as a net license fee.

Reference for the upper limit of the total amount.

Dr. Deng Fei's analysis and calculations regarding the "Samsung Electronics-Huawei Agreement" and its implications

The breakdown and calculation of the "ZTE-Apple 2020 Agreement" is similar. First, Deng...

Dr. Fei [redacted] Under the premise of, adopt

The following formula can be used to break down Huawei's one-way licensing fee under the "Samsung Electronics-Huawei Agreement".

Rate:

[redacted]

Dr. Deng Fei obtained based on [redacted] Huawei's patent family of computing

The percentage is [redacted] Huawei's one-way license fee rate is [redacted]

based on [redacted] The calculated percentage of Huawei's patent families is a [redacted]

Huawei's one-way license fee rate is [missing in [redacted]

Dr. Deng Fei [redacted]

Under the premise of ZTE's patent family share under the 2024 Agreement and the Three...

The ratio of Huawei's patent family share under the "Huawei Agreement" is used to calculate the applicable...

ZTE's one-way license fee rate under the 2024 Agreement is based on [redacted]

[redacted] In the calculation

Xingtong's one-way license fee rates are respectively [redacted]

Dr. Deng Fei further hypothesized [redacted]

According to the 2024 Agreement, Samsung Electronics and ZTE's patents

Family share ratio, calculated in accordance with the Samsung Electronics unilateral license under the 2024 Agreement.

Intellectual Property Finance

Fees can be obtained based on

Samsung Electronics' one-way licensing rates are as follows:

Based on the above analysis of the "Samsung Electronics-Huawei Agreement", ZTE Corporation,

Samsung Electronics' one-way licensing fee rate is based on

The total net license fee under the 2024 Agreement is

,based on

Net income of the 2024 Agreement

The total license fee is

(iv) Dr. Huang Kun's rebuttal to Dr. Deng Fei's comparable agreement method calculation

See and Dr. Deng Fei's response

1. Dr. Huang Kun's rebuttal to Dr. Deng Fei's comparable agreement method calculation

Regarding Dr. Deng Fei's actions based on the "2021 Agreement" and the "ZTE-Apple Agreement,"

As a dismantling of the 2020 Agreement as a comparable agreement, Dr. Huang Kun's main objection is...

See as:

First, Dr. Deng Fei's analysis and breakdown of Samsung's interpretation of the "2021 Agreement"

The obtained fee rate is extremely low, and the implied industry cumulative fee rate is also abnormally low, therefore its estimation...

The total net license fee under the 2024 Agreement is far below reasonable levels.

Second, Dr. Deng Fei calculated the breakdown by sales location of Samsung Electronics licensed products.

Regional patent strength, multi-modal weighting, and licensing products by category and generation.

The "triple weighting" of product sales after weighting is clearly unreasonable and contradicts industry practices.

It lacks feasibility, has never been adopted in practice, and only references sales.

Calculating patent strength in isolation ignores the implementation of patents in processes such as production, which leads to bias.

Incorrect. Furthermore, Dr. Deng Fei used the regional patent strength denoted by the molecule.

The calculation method of using global patents as the denominator is inconsistent and contains errors.

## Intellectual Property Finance

Third, Dr. Deng Fei's disassembly formula contains fundamental errors. (In the disassembly...)

When the "2021 Agreement" was signed, it directly assumed that ZTE would skip generations under the new and old agreements.

The ratio of the international hybrid licensing rates is equal to ZTE's hybrid license rates under the new and old agreements.

In terms of relative strength, this involves dismantling the "ZTE-Apple 2020 Agreement" and the "Samsung Agreement."

Electronics Datang Agreement; Samsung Electronics Docomo Agreement

Five agreements: the Samsung Electronics-NEC Agreement and the Samsung Electronics-Huawei Agreement.

During negotiations, whether it's the two rights holders of the same cross-licensing agreement or different...

The rights holder of the agreement,

Dr. Yu Dengfei's decomposition methodology contains fundamental errors, and his decomposition results are bound to be flawed.

However, it lacks reliability.

Fourth, Dr. Deng Fei's opinion on all agreements in this case (including cross-agreements or unilateral agreements)

All protocols use the same decomposition formula, and the important implications of this formula and methodology are...

The premise is that the patents of all rights holders (and across all generations) are of "average value".

The patent for "value". When Dr. Deng Fei questioned the top-down approach, he argued that...

The biggest drawback of this method is that it "assumes the patent portfolio owned by the patentee in question".

The average unit patent value is equal to the average unit price of all patents under the same standard.

The claim that it is "value" is clearly self-contradictory.

Fifth, Dr. Deng Fei based his work on the "Samsung Electronics Datang Agreement" and the "Samsung Electronics..."

Docomo Agreement

Samsung Electronics NEC Agreement

The cumulative tariff rates for cross-generational mixed industries from 2G to 5G obtained from the analysis are significantly lower. [REDACTED]

[REDACTED]

## Intellectual Property Finance

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Moreover, when Samsung Electronics and Datang signed the agreement, both parties also had...

Amidst fierce global lawsuits and patent invalidation proceedings, the background of its signing may also include...

It contains psychological coercive factors.

Sixth, Dr. Deng Fei disassembled the device based on the "ZTE-Apple 2020 Agreement".

The resulting ZTE mixed tariff rate applicable to the 2024 agreement. [REDACTED]

[REDACTED] Further support the "China

The signing of the "Xingtong-Apple 2020 Agreement" had a special background, and the agreement reflects...

ZTE's rates are not FRAND rates and are therefore not of reference value.

Seventh, according to the terms of the "Samsung Electronics-Huawei Agreement," this agreement...

yes [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] In addition, Samsung Electronics' economy

Scholars' analysis of the agreement also reveals connections with other Samsung Electronics economics cases in this matter.

The report contains the same disassembly logic error.

## 2. Dr. Deng Fei's response to Dr. Huang Kun's rebuttal

### Intellectual Property Finance

In response to Dr. Huang Kun's views, Dr. Deng Fei stated that regardless of the licensing fee rate...

The strength of ZTE's patent portfolio reflects its overall value; however, the specific manifestations are...

The description methods differ, but the unit patent value of ZTE Corporation is relative to the industry average.

If the value does not change significantly during the period between the old and new agreements, it can be used in the form of...

Patent share is used to measure patent value. The two parties agreed on the 2021 Agreement.

The discrepancy in the calculation results mainly stems from the different interpretations of the licensing value of the 2021 Agreement by both parties.

The corresponding sales periods are set differently, but Dr. Huang Kun commented on the "2021 Agreement".

The interpretation of the "Discussion" is incorrect.

## VI. Other Facts

### (a) Responses by both parties to the court's inquiries

During the court hearing, this court asked both parties the following questions: First, are you willing to accept...

What are the conditions for both parties to grant this court's ruling? Second, if this court issues a ruling, what are the conditions for both parties to grant it?

Will the ruling automatically comply with the corresponding licensing conditions? Third, if this court makes a ruling...

After the ruling on the conditions for granting the license, are both parties willing to withdraw the mutual lawsuits accepted by this court?

In related patent infringement cases, this includes requests to cease infringement and even withdrawal of the corresponding lawsuits.

Samsung stated: First, Samsung has always been willing to abide by its operating principles.

The laws of the jurisdiction. Samsung will comply with any effective rulings of Chinese courts in accordance with the law.

To respond. Second, prior to this lawsuit, Samsung Electronics had already addressed the same issue in the UK.

The party filed a lawsuit and promised the British courts unconditionally to be bound by their rulings. Given...

It had made a prior commitment to the British court, provided that the Chinese court's ruling was legally sound.

Not in conflict with Samsung Electronics' existing obligations in the UK courts, Samsung Electronics is willing to fulfill its obligations.

The rulings of Chinese courts are effective. Third, if ZTE Corporation is in all jurisdictions...

The district lifted the injunction against both parties in their global dispute, and Samsung Electronics will also withdraw its agreement with both parties.

All injunctions relating to the dispute.

Intellectual Property Finance

ZTE stated: ZTE promises to accept and voluntarily comply with the decisions of the Chinese courts.

The global cross-licensing conditions determined, if Samsung agrees to commit and voluntarily fulfills them.

ZTE is willing to waive other litigation restrictions in accordance with the licensing conditions stipulated in the Chinese court ruling.

The request is hereby made.

(II) Mediation regarding the dispute in this case

Both parties acknowledge that, as of the time of this court hearing, the dispute regarding the licensing conditions in this case remains unresolved.

There was actually a mediation process between the two parties.

During the court hearing, the court inquired whether the parties were willing to have the court organize mediation.

ZTE agreed. Samsung, however, stated that...

Based on the principle of reciprocity, Samsung in this case

The same reasoning was used in the reply.

The court holds that this case is a dispute over the licensing of standard essential patents, caused by one party...

The parties involved are a South Korean company, thus this case has foreign elements. The People's Court hears foreign-related civil cases.

Disputes require the characterization of the disputed foreign-related civil relationship, and then direct action can be taken based on the characterization.

This may indirectly determine the applicable law for adjudicating disputes. (This refers to the relevant provisions of the "Law of the People's Republic of China on the Protection of Minors").

Article 8 of the Law on the Application of Laws to Foreign-related Civil Relations stipulates that "the nature of foreign-related civil relations shall be determined by the relevant laws and regulations."

"Applicable law of the forum". This case involves a standard essential patent licensing dispute between the two parties.

The parties intended to enter into a cross-licensing agreement for the standard essential patents in question and should have entered into such an agreement, but ultimately...

In the event that no actual contract is concluded, what standards should the licensing terms be based on?

Disputes arising from the conclusion of this contract shall be characterized in accordance with the laws of the People's Republic of China.

The dispute is a contractual dispute arising from pre-contractual negligence. (This is in accordance with the relevant provisions of the "Law of the People's Republic of China on the Prevention and Control of Infectious Diseases.")

Article 41 of the Law on the Application of Law in Foreign Civil Relations stipulates that "the parties may agree..."

Choose the applicable law for the contract. If the parties have not made a choice, the law most favorable to the performance of obligations shall apply.

## Intellectual Property Finance

The law of the habitual residence of one of the parties that reflects the characteristics of the contract, or other laws related to it.

"This contract has the closest legal connection." Both parties in this case acknowledge that the plaintiff, ZTE Corporation, is...

The company is the net licensor in the cross-licensing agreement, and its registered office is in the People's Republic of China.

Within the country, the standard essential patents involving cross-licensing of the two schemes contain a large number of Chinese...

China is also one of the main places of implementation for the standard-essential patents in question.

In accordance with Article 41 of the Law of the People's Republic of China on the Application of Laws to Foreign-related Civil Relations

The provisions of this article shall apply to the determination of the licensing conditions for the standard essential patent in this case.

The laws of the People's Republic of China. In view of the standard essential patent licensing terms in this case...

The process of finalizing the agreement involved the interpretation of the terms of the 2021 Agreement between the two parties.

Article 8.2 of the Agreement stipulates that "the interpretation, understanding, validity, performance and other aspects of this Agreement shall be governed by and construed in accordance with the Agreement."

"Both are subject to the substantive laws of the State of California," and the parties in this case agree on this point.

There is no objection to the terms and applicable law; therefore, regarding the disputed terms of this agreement...

The interpretation shall be based on the agreement between the parties to select the applicable entity in the State of California, USA.

law.

In this case, the parties submitted FRAND (French as a foreign language) to international standardization organizations such as ETSI.

The plaintiff promises that the patent licensing terms requested for confirmation are also in accordance with FRAND principles.

Both parties have no objection to this, and this court confirms it. Regarding their respective possession of the items in question...

Negotiations for licensing standard essential patents have commenced, involving multiple rounds of business and technical discussions.

Both attempts to reach a settlement failed due to the significant price difference between the two parties. Consequently, they engaged in mutual retaliation across multiple global markets.

Several countries and regions have filed patent infringement lawsuits. This demonstrates that, regardless of the negotiation process...

The cycle and outcome, or the litigation activities of both parties worldwide, can all be clearly understood.

It is clear that both parties have fully discussed the cross-licensing conditions for the standard-essential patents in question.

Negotiations have failed to reach an agreement through market negotiations. In this situation, the court...

The authority has the power to adjudicate the cross-licensing terms of the standard essential patents involved in the case in accordance with the law in order to break the deadlock in negotiations.

## Intellectual Property Finance

Therefore, this court will, in accordance with the principle of good faith and in combination with fairness, reasonableness, and non-discrimination, [take action].

The principle is to determine the conditions for cross-licensing between the two parties in this case in accordance with the law. It should be noted that the existing...

Evidence shows that there is corresponding litigation in a foreign court regarding the dispute over the licensing conditions in this case.

Given that the purpose of litigation in licensing disputes is always to facilitate an agreement between the parties,

The standard-essential patent license in question, therefore, is subject to jurisdiction by foreign courts regarding the scope of the license.

This court will respect any licensing terms determined by other countries for patents held in China.

Based on the evidence presented and examined by both parties, as well as their arguments, this court summarizes the main points of contention in this case.

The focus of the discussion was: 1. The interpretation and explanation of the disputed clauses in the 2021 Agreement between the two parties;

II. Selection and determination of comparable agreements in this case and the corresponding scope of comparability; III. This case has

How are the conditions for obtaining a permit determined? This court will discuss these in detail below.

### I. Understanding and Interpretation of the Disputed Clauses of the 2021 Agreement

The 2021 Agreement was the first agreement reached by both parties on July 9, 2021.

Cross-licensing agreement. The agreement stipulates that both parties will cross-license related standards such as 2G, 3G, and 4G.

The essential patents and implementing patents are licensed for a period of 3 years, commencing on the effective date of the agreement in 2021.

From January 1, 2020 to December 31, 2023, the agreement amount was [amount missing] from Samsung Electronics to [missing information].

Xingtongxin Net Payment [REDACTED] The agreement also included a clause on a promise not to sue, and a clause on...

Regarding the exemption clauses, etc., the actual content of the "2024 Agreement" in question...

This is a renewal agreement for the agreement, and in this case, Samsung insists on having priority in renewing the agreement.

The agreement covers the entire scope of standard essential patents licensed under the 2024 Agreement.

Compared to the agreement, during the court hearing, there were differences in the understanding and interpretation of the core terms of the agreement between the two parties.

A major point of contention is that the plaintiff argues the agreement's scope does not include any 5G standard requirements.

The patent is required, and the fees paid under the agreement do not cover the non-litigation clause.

The price did not cover the monetary consideration for previous waivers. The defendant argued that the agreement...

The only patents not licensed under this agreement are pure 5G standard essential patents, and the fees paid under the agreement...

## Intellectual Property Finance

The consideration covers the value of exemptions since 2013 and the non-suit clause. Because of...

The understanding and confirmation of the core provisions of the 2021 Agreement will directly affect subsequent developments.

The key disputed issues, such as whether the agreement is comparable and the scope of comparability, are therefore addressed by this court.

Let's analyze this first.

Regarding the applicable law for interpreting the relevant agreement content, as mentioned above,

Interpretation of the Clauses of the 2021 Agreement Based on the choices of the parties and the agreement.

The interpretation applies under the substantive laws of the State of California. The defendant ascertained...

Sections 1636, 1638, 1639, and 1641 of the California Civil Code

The plaintiff acknowledges this, and this court, in accordance with the "Law of the People's Republic of China on Foreign-related Civil Relations,"...

This is confirmed by Article 10, Paragraph 1 of the Applicable Law. Specifically, the [Law on the Application of Law]...

Section 1636 of the California Civil Code establishes that when interpreting contracts, one should "as far as possible" [to interpret them].

If the contract can achieve the common intent of both parties at the time of its conclusion, provided that intent is ascertainable and reasonable.

"Law." Sections 1638 and 1639 of the California Civil Code establish...

The rules for interpreting contracts are based on literal meaning. Article 1638 states, "If the contract..."

If the language of the contract is clear and unambiguous, and does not contain any absurdities, then the language of the contract should be followed.

"To explain in words." Article 1639 further stipulates for written contracts "when..."

The contract has been concluded in writing, and it is possible to ascertain the parties solely through written documents.

"If a person's intent is to be determined, then the intent should be determined solely based on that written document." Article 1641 also states...

It establishes a rule for the interpretation of contracts based on a holistic approach. This rule stipulates that "the interpretation of a contract should be based on..."

In conjunction with the overall content of the contract, ensure that each part of the contract, where reasonable and feasible, is in accordance with the contract's provisions.

All clauses are valid, and the clauses complement each other in their interpretation.

The aforementioned provisions establish two interpretation methods for contract interpretation: interpretation based on the contractual agreement and interpretation based on the literal meaning.

In addition to several basic principles and rules, including overall interpretation, this court, based on the aforementioned provisions,

The provisions and established principles and rules in the document shall be used to interpret the content of the disputed clauses between the two parties.

## Intellectual Property Finance

(i) The scope of the 2021 Agreement does not include 5G standard-essential proprietary technology.

### Licensing

First, looking at the text of the 2021 Agreement, the licensing of patents and...

Licensed products are defined based on licensing standards, which specify in the definition of the licensing standards.

The 5G standard has been excluded. Given that the licensing standards are limited to 2G-4G standards,

Because of the objective existence of the 4G standard essential patents mentioned in the agreement text, which are also declared as being related to 5G

This is a necessary situation for the standard to ensure that the 2021 Agreement covers 2G-4G technologies.

Full licensing, the 2021 agreement covers 4G and [other technologies] in the definition of licensed patents.

The definition of cross-patents and licensed products for 5G excludes licenses for "pure 5G functionality".

The text can only be understood as referring to 2G-4G technologies in the context of the unlicensed 5G standard.

Clarification of the full technology license, rather than extending it to the 5G standard as a whole.

Patent licensing, or else the entire meaning of the licensing standard terms of the agreement will be completely negated.

Secondly, the preamble to the 2021 Agreement clearly states that both parties hope to have more...

The two sides have engaged in friendly negotiations on 5G protocols for an extended period, and have also reached an agreement on essential patents for 5G standards.

An additional period of silence was established, thus extending the overall arrangement of the 2021 Agreement.

See, only by understanding that the scope of the license does not include 5G standard essential patents can we ensure...

The consistency of meaning in the overall text of the 2021 Agreement.

Furthermore, the two sides did not exchange views or cooperate during the technical negotiations of the 2021 agreement.

Discuss a comparison table of essential patent claims for any 5G standard and submit it during business negotiations.

The terms of the exchange explicitly excluded the 5G standard, and the aforementioned negotiations proved that both sides...

During the negotiation process, the company was not granted the 5G standard or the essential patents for the 5G standard under that standard.

A licensing agreement, in which the meaning of the agreement text is interpreted more in accordance with the agreement reached by both parties.

To determine the circumstances and the true agreement.

Finally, this court notes that,

[REDACTED]

Intellectual Property Finance

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

In conclusion, this court holds that, regardless of the text of the 2021 Agreement...

The understanding of the contract itself, the mutual agreement between the parties during the contracting process, and consideration of other agreements are all taken into account.

Based on similar arrangements and the parties' understanding, the 2021 Agreement should be interpreted as merely...

The licensing involves essential patents for 2G-4G standards, but not any essential patents for 5G standards.

Permitted.

(ii) The licensing fee under the 2021 Agreement does not cover the consideration for the non-litigation clause.

The court finds that the non-litigation clause in the 2021 Agreement clearly stipulates that...

"If both parties renew the agreement or sign a new patent license agreement upon its expiration."

The agreement stipulates that both parties should consider the value of exemptions covering the CNS period, based on the contract.

The principle of anti-redundancy in the overall interpretation should be understood as meaning that when both parties renew the agreement or enter into a new one...

When drafting a licensing agreement, the licensing value corresponding to the CNS period should be included in the new agreement.

## Intellectual Property Finance

The scope of consideration should be taken into account; otherwise, there is no need to specifically stipulate this clause. Both parties should agree upon this.

The non-suit clause merely waives the right to file infringement lawsuits regarding licensed patents during the CNS period.

And the right to obtain damages through tort litigation, and the agreement between the two parties regarding the CNS period

The rights and obligations regarding the receipt and payment of license value are transformed into renewal or a new agreement.

The contractual obligations under this agreement are subject to the renewal of the agreement or the signing of a new agreement by both parties.

This can be fulfilled through an agreement. ZTE has repeatedly stated this during the licensing negotiations.

There was no intention to grant exhaustion rights during the CNS period. Therefore, this court holds that, from the contractual perspective...

In general, the licensing fees under the 2021 Agreement do not cover the non-litigation clause.

Consideration.

(iii) Does the licensing fee under the 2021 Agreement cover previously waived portions?

The monetary consideration is not within the scope of the clause interpretation and should be addressed when the agreement is broken down.

Decision

Regarding the disputed licensing fees in the 2021 Agreement, whether they cover prior payments...

The issue of waiving part of the monetary consideration. In fact, neither party had any objection to the terms of the agreement itself.

The controversy lies in whether the monetary consideration for the previous exemption clause should be zero or a certain amount.

Value. Regarding this dispute, it is impossible to ascertain the answer solely from the content of the agreement; the value cannot be determined through the agreement text.

An explanation is needed. It's impossible to know whether the parties reached an agreement through the contractual process alone.

The agreement was reached. Therefore, the dispute is not about the understanding and interpretation of the agreement's terms, but rather...

This issue will be resolved during the dismantling of the agreement, and this court will not comment further on it here.

### II. Comparability Determination and Specific Scope of Comparability of Relevant Licensing Agreements

In this case, considering the claims of both parties, the comparability of the agreements in question needs to be determined.

The agreement includes the "2021 Agreement" between the two parties, and the "ZTE Agreement" between ZTE and Apple.

Apple's 2020 Agreement and the agreements between Samsung Electronics and Ericsson, Nokia, and Interactive Digital.

The terms "Samsung Electronics Ericsson Agreement", "Samsung Electronics Nokia Agreement", and "Samsung Electronics Nokia Agreement" are mentioned.

## Intellectual Property Finance

The "Star Electronic Interactive Digital Protocol" consists of five agreements.

In addition, Samsung also presented the "Samsung Electronics Datang Agreement" and the "Three..." in this case.

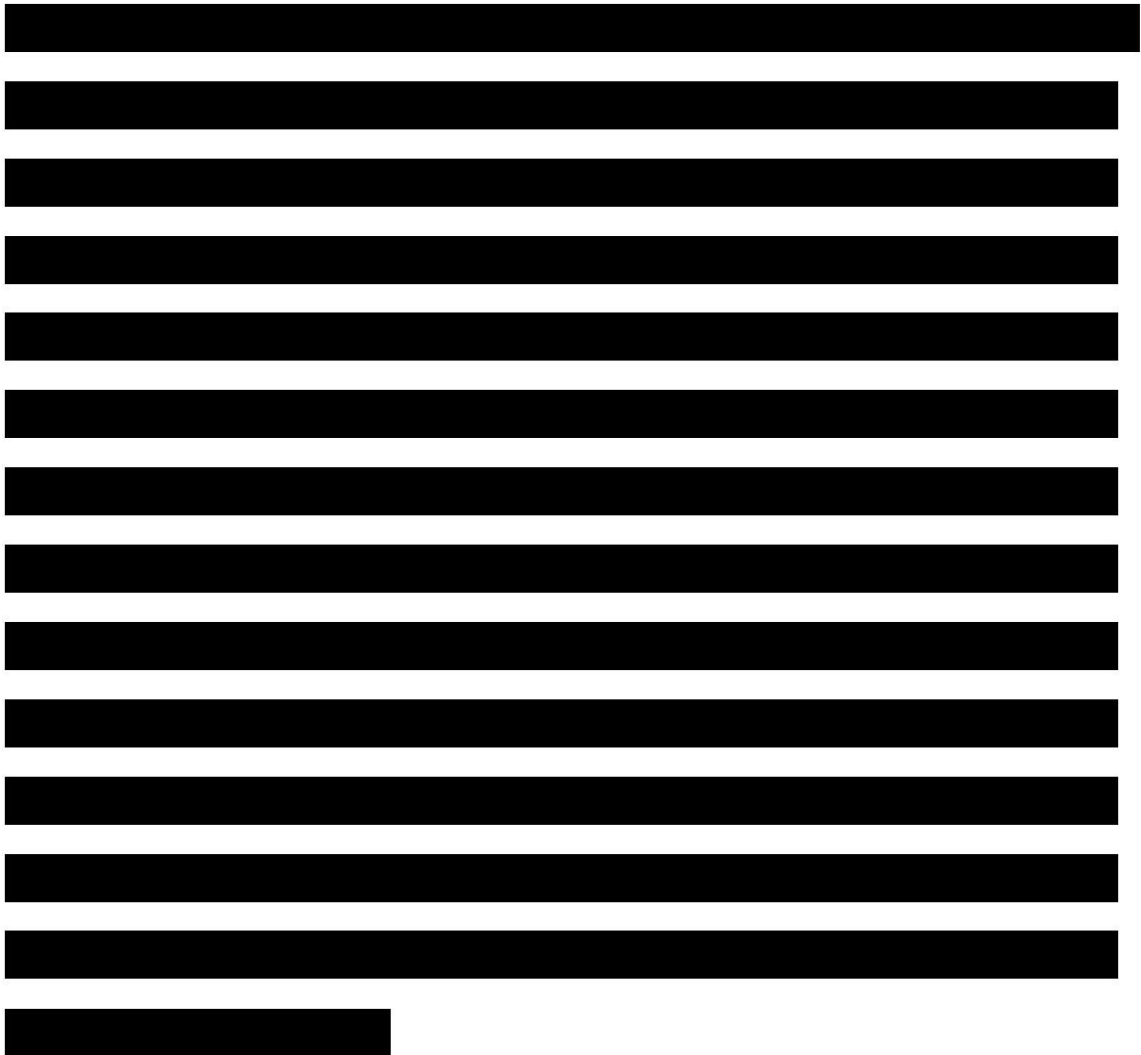
Star Electronics Multicom Agreement



Samsung Electronics NEC

The agreement and the Samsung Electronics-Huawei agreement explicitly state that neither of the above agreements...

Used as a comparable agreement, it is for corroborative reference only. In this regard, the court holds that...



The court holds that, in principle, assessing the comparability of licensing agreements requires a comprehensive evaluation.

Taking into account the environment of licensing negotiations, the similarity of the licensors, and the similarity of the licensed patents.

Factors such as similarity and similarity of licensing terms should be considered. It is important to note the litigation process.

In this case, the parties present relevant agreements and claim that they are comparable agreements, which is highly likely to involve vested interests.

Considering personal factors, therefore, for those that formally meet the above factors but whose actual cooperation...

## Intellectual Property Finance

If the breakdown of the agreement's content deviates drastically from common sense, the court must determine the validity of such an agreement.

We take a cautious approach to the determination of sex.

Based on the aforementioned principles, this court determines that the 2021 Agreement is the 2024 Agreement.

The comparable agreement in this case is the licensing agreement for essential patents of the 2G-4G standard under the "Annual Agreement"; the "Samsung Electric" agreement.

The Nokia Agreement is a license for essential 5G standard patents under the 2024 Agreement.

Comparable agreements include the ZTE-Apple 2020 Agreement and the Samsung Electronics-Ericsson Agreement.

The "Signal Agreement" and the "Samsung Electronics Interoperable Digital Protocol" are not comparable. Specific reasons are as follows.

as follows:

(a) The 2021 Agreement is a prerequisite for the 2024 Agreement on 2G-4G standards.

Comparable agreements in this case that require patent licensing

The 2024 Agreement is essentially a renewal of the 2021 Agreement.

The 2021 Agreement has advantages over other agreements in many aspects, including the signatory parties and licensed patents.

The highest degree of similarity to other agreements in this case. During the court hearing, ZTE Corporation argued that...

The agreements are not comparable, but in order to facilitate the swift conclusion of the "2024 Agreement" by both parties, its explicit...

They explicitly expressed their willingness to make concessions and agreed that the applicable provisions of the 2021 Agreement could be dismantled.

Samsung also confirmed the licensing rates for the 2G-4G portion of the 2024 agreement and the 2021 agreement.

The dismantling of the 2024 Agreement can be applied to the licensing fees for the 2G-4G portion of the 2024 Agreement.

Therefore, this court comprehensively considers the closely related factors of the two agreements, and based on the previous...

The interpretation of the 2021 Agreement not including 5G licenses and the court proceedings between the parties.

The consensus reached during the review process was to recognize the 2021 Agreement as the 2024 Agreement.

The 2G-4G licensing agreements in this case are comparable. Regarding Samsung's claim that the agreement is comparable...

The scope also includes claims regarding 5G licensing, as this court has already demonstrated in the aforementioned argument that the agreement does not include...

The claim regarding 5G licensing lacks factual basis and is therefore not supported by this court.

(ii) The ZTE-Apple 2020 Agreement cannot be used as a basis for 5G in this case.

## Intellectual Property Finance

Comparable agreements for standard essential patent licensing

Samsung argues that if the 2021 agreement cannot be used as a comparable 5G agreement,

Therefore, the "ZTE-Apple 2020 Agreement" should also be considered superior to other agreements in this case.

ZTE argues that the most comparable 5G protocol is not comparable. This court has no further comment on this.

The statement acknowledges ZTE's position, arguing that factors such as a distorted licensing negotiation environment contributed to the situation.

This means that the agreement cannot be considered a comparable agreement for the 5G license in this case.

First, looking at the background of the agreement, the "ZTE-Apple 2020 Agreement"

The licensing negotiation period is [REDACTED] The signing date is [date missing] [REDACTED]

Based on the facts ascertained by this court, ZTE Corporation paid a huge cash fine in 2018.

The company's inability to pay deposits and security deposits has led to significant financial difficulties and an urgent need for cash.

The evidence on file shows that ZTE's free cash flow was negative in its 2018 and 2019 annual reports.

Publicly available financial reports regarding negative assessments of ZTE during this period and the company's stock performance.

During this period, ZTE internally required a change in strategy to maximize cash flow.

The facts, such as the flow of goods, can provide some degree of corroboration. And this period coincided with discussions between the two parties.

The judgments and even the signing dates highly overlapped. ZTE's financial situation posed a constraint.

The coercive psychological factors that give Xingtong a strong negotiating position distort the negotiation environment in this context.

Under these circumstances, the terms of the final "ZTE-Apple 2020 Agreement" are very likely to be...

It cannot reflect the true and fair market value of ZTE's patent technology portfolio.

Secondly, the terms of the agreement and the negotiation process further corroborate the existence of the permit negotiations.

The distortion of the judgment environment makes the protocols incomparable. [REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance

[REDACTED] his and China

This corroborates Xingtong's statement that it urgently needs cash flow. The above facts can substantiate the claim.

The distortion of the negotiation environment has further impacted the negotiation process and the specific terms of the agreement.

This could potentially lead to a significant increase in the value of patented technologies obtained through dismantling based on this agreement.

It does not match its reasonable market value.

again, [REDACTED]

[REDACTED]

[REDACTED] This agreement is regarded as

The comparable 5G protocols in this case are not a suitable choice.

Fourth, the disassembly results of the "ZTE-Apple 2020 Agreement" are relatively clear.

The discrepancy is obvious. The same simple breakdown calculation method, as claimed by both parties in this case, was applied. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] This relatively unusual result also serves as evidence that it should not be considered...

Comparable agreements for 5G licensing in this case.

Finally, regarding ZTE's question about the special circumstances of Apple's enforcement mechanism,

Existing evidence shows that there are indeed instances in relevant judgments of other countries that have determined the validity of ZTE's claims.

The situation is incomparable to the "Apple 2020 Communication Agreement".

In conclusion, this court holds that the "ZTE-Apple 2020 Agreement" is not...

The appropriate 5G comparable protocols in this case are relatively incomparable in this case.

(III) The Samsung Electronics-Nokia Agreement is the 5G standard for the 2024 Agreement.

Comparable agreements in this case regarding the scope of quasi-essential patent licenses, such as the Samsung Electronics-Ericsson Agreement.

The Samsung Electronics Interoperability Protocol (ICP) is relatively incomparable.

First, from the perspective of the licensing negotiation environment, the Samsung Electronics-Nokia Agreement...

Intellectual Property Finance

Significantly superior to the Samsung Electronics Ericsson Agreement and the Samsung Electronics Interactive Digital Protocol.

The agreement. Both parties to the three agreements with Samsung Electronics during the licensing negotiations...

The business is operating normally, and there have been no unforeseen events or financial difficulties that are obviously detrimental to either party.

In this context, there are no psychologically coercive factors that could seriously affect the negotiating position of either party. However...

The Samsung Electronics-Nokia Agreement was reached entirely through negotiation between the two parties, without any...

Any litigation or injunction, etc., will have an impact; the Samsung Electronics-Ericsson Agreement is subject to litigation.

The agreement was reached during the process, and the parties are involved in global litigation, which will affect the outcome.

The Samsung Electronics Interactive Digital Protocol was licensed through arbitration proceedings, reflecting...

Arbitrators' independent analysis and judgment based on the facts of the case are influenced by arbitration factors.

ring.

Second, from the perspective of the licensing entity, the "Samsung Electronics-Nokia Agreement" and the "Samsung-Nokia Agreement" are related to the licensing of Nokia.

The Samsung Electronics Ericsson Protocol is superior to the Samsung Electronics Interactive Digital Protocol.

[REDACTED]

[REDACTED]

From the perspective of the implementer,

Ericsson and Nokia's business models and scope of operations are similar to ZTE's, mainly...

ZTE's core business is focused on the base station market, and it collaborates with Ericsson and Nokia in the enterprise market.

In terms of business scale and operations, they are comparable. From the perspective of the rights holder, Ericsson...

Nokia, ZTE, and others are all global standard essential patent holders with physical businesses.

The patent holder ranks among the top ten globally in the number of declared 4G and 5G standard essential patents.

Although the patent portfolios of each rights holder are different, they are relatively small-scale.

Patent portfolios, especially large-scale ones, are more likely to meet certain criteria due to the large number of patents involved.

The distribution follows a uniform pattern. Furthermore, the third-party assessment report on file shows that Nokia and Ericsson...

The necessity rate is basically the same as that of ZTE's patent portfolio, which is at the industry average level.

Moreover, Nokia, Ericsson, and ZTE are all leading global infrastructure companies.

Intellectual Property Finance

Suppliers not only develop technologies but also actively promote the formation and practical application of standards.

This striking similarity in business operations and relationships with R&D, standards, and patents makes it comparable to...

Patent portfolios that are highly correlated under certain conditions are highly comparable. However, interactive digital patents are not.

The entity operates as a pure licensor, and its number of standard essential patent declarations is significant.

Weaker than Nokia, Ericsson, and ZTE. Therefore, from the perspective of the licensing entity...

It is said that Samsung Electronics' Interactive Digital Protocol (IDP) is inferior to the other two protocols.

Third, from the perspective of licensed patents,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Fourth, in terms of licensing conditions,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Taking all the above factors into consideration, this court finds that, of the three agreements, the one between Samsung Electronics and Samsung Electronics is the most significant.

The Nokia Agreement is a relatively superior agreement for 5G, and this court ultimately ruled that the Nokia Agreement is superior.

The Nokia-Star Electronics Agreement serves as the most appropriate comparable agreement for determining the 5G portion of the licensing fee in this case.

Agreements: Samsung Electronics Ericsson Agreement, Samsung Electronics Interoperable Digital Protocol

They are relatively incomparable.

### III. Method for Determining the Specific Licensing Conditions in this Case

In this case, the plaintiff, ZTE Corporation, addressed the licensing conditions specified in its claim.

Specifically, the scope of the license requested is a worldwide license.

## Intellectual Property Finance

The licensed standard is the 2G-5G wireless communication standard; the licensed patents belong to both the plaintiff and the defendant.

Owned and licensed essential patents for 2G-5G wireless communication standards; license period

Limited to the period from January 1, 2025 to December 31, 2029; the licensed products are...

Mobile terminals and infrastructure equipment from both parties, but excluding 6G or higher generation products;

The one-time licensing fee is \$731 million, including the period ending January 1, 2024.

2G-5G cross-licensing fees up to December 31, 2029, and January 1, 2019.

5G past cross-licensing fees up to December 31, 2023.

Regarding the specific conditions for the plaintiff's claim for permission, both the plaintiff and the defendant agreed on the global scope...

License terms, licensing standards, licensed patents, license term, licensed products

The agreement reached during the court hearing is hereby confirmed by this court.

Regarding the calculation and determination of the licensing fee, given that this court has already determined the 2021 Agreement...

Excluding 5G standard essential patent licenses and licensing fees involved in the agreement, the non-litigation clause is not covered.

The consideration for the payment. This court confirms that the license fee to be determined in this case includes: 1. [Amount] in 2024.

2G-5G cross-licensing fees from January 1, 2019 to December 31, 2029.

Cross-licensing fees for 5G past licenses from January 1, 2020 to December 31, 2023.

Regarding the choice of method for calculating the license fee, this court uses the 2021 Agreement as the reference.

As a comparable protocol for licensing essential patents from 2G to 4G standards, the use of comparable protocols

The method calculates and determines the cross-licensing fees for essential patents from 2G to 4G standards. For 5G standards...

The calculation of patent cross-licensing fees is based on the claims of the parties and the existing evidence.

This court used both a top-down approach and a comparable agreement approach to determine the terms. Comparable Agreement

In this case, this court holds that the "Samsung Electronics-Nokia Agreement" is an essential patent for the 5G standard.

The calculations are performed using comparable protocols. Based on the obtained calculation results, this court...

Compare the calculated results with the amounts of licensing fees claimed by both parties, and determine the most similarity.

The reasonable amount of the license fee in this case was finally determined.

## Intellectual Property Finance

Regarding the defendant's argument that a comparable agreement exists in this case, priority should be given to...

The claim that the comparable agreement method should be applied, with the top-down approach serving at most as a supplementary reference, is valid.

The court holds that, in current practice, both the comparable agreement method and the top-down approach are used to determine the standard.

The main methods for calculating essential patent licensing fees, whether the comparable agreement method or the top-down method...

Both methods have their advantages and disadvantages, and there is no definitive conclusion as to whether one method is superior to the other.

Both domestic and international judicial cases have instances where both methods have been applied. Therefore, it is evident that...

There is currently insufficient evidence to prove that there is a necessary order of application between the two methods.

Therefore, this court does not accept the defendant's claim.

### IV. Deconstructing and calculating the 2021 Agreement to determine the necessity of 2G-4G standards.

#### Patent licensing rates

##### (a) Consideration of the value of past exemption clauses

Because the 2021 Agreement included previous exemption clauses, the dismantling of this agreement...

Before the release, the monetary value of any previous waiver clauses needs to be determined. Regarding previous...

Both parties agree that the period covered by the exemption clause is from 2013 to 2020. This court...

This has been confirmed. The point of contention between the two parties lies in the specific monetary value involved in the previous waiver clauses.

The plaintiff argues that the clause was not actually assigned a value, while the defendant maintains that it was.

Its specific value should be the same as the license value during the agreement period, taking into account the statute of limitations.

For the question, the calculation can start from 2015.

The court holds that, regardless of whether the plaintiff claims no value was assigned or the defendant assigns a full value or...

Claims to assign partial value based on the statute of limitations lack factual basis and are inconsistent with objective facts.

The situation is inconsistent and cannot be supported. The specific reasons are as follows:

First, unlike non-litigation promises which only apply to the parties during a certain period.

Procedural restrictions on rights. Past exemption clauses addressed the substantive rights of the rights holder for a specific period.

The arrangement of interests was not clearly stated in the negotiation process and the text of the agreement.

## Intellectual Property Finance

In the absence of an assigned value, it is logical to assign a value to the exemption. Therefore, the original...

The plaintiff's claim that the clause is not assigned a value lacks factual basis and is therefore rejected by this court.

Accepted.

Secondly, this court considers the following factors to determine the past exemption of the 2021 Agreement.

The exemption clauses cannot be fully assigned value; a certain discount should be given: First, this agreement is bilateral.

For the first agreement signed by the party as a large-scale licensing entity, such agreements are generally based on past experience.

Compared to the longer future agreement period, the rights holder can obtain full compensation for past periods through negotiation.

The difficulty is extremely high, and the existence of past exemptions and discounts is in line with common business sense; secondly, the two parties discussed...

During the sentencing period, ZTE paid a huge fine and pursued further action to quickly restore the company's development.

There is some overlap in the periods for calculating free cash flow, which distorts the negotiation context.

While not to the extent that the agreements are incomparable in this case, they may still be open to negotiation.

The trial process and the drafting of the agreement terms have a certain impact, while past exemption clauses...

The agreement covers an eight-year period and is a significant clause, but the parties have not yet agreed on the consideration for this clause.

Any discussion and explicit agreement, and a simple calculation of the result of all assignments, further strengthen the agreement.

The rates are significantly too low and clearly illogical, a fact that further supports this claim.

Discounts should be considered; third, the statute of limitations should be taken into account when considering discounts.

The existence of different statutes of limitations in various countries also indirectly encourages perpetrators.

Delaying the negotiation process is not conducive to reaching an agreement, and this claim cannot be supported.

In the absence of a clear agreement and when neither party's claim is supported, it is both a means to promote

To enable rights holders to assert their rights as soon as possible, initiate substantive negotiation processes, and reach a reasonable agreement between the two parties.

It is expected that this will facilitate the signing of such first agreements and prevent implementers from evading past practices.

The court shall determine the compensation for the rights holder based on the commencement time of substantive negotiations agreed upon by both parties.

Assign a starting point for the value of past exemptions and apply monetary discounts accordingly for past periods.

Specifically, the substantive negotiations between the two parties on the 2021 Agreement began in 2018.

## Intellectual Property Finance

September of that year can be used as the starting point for discount calculation up to the commencement period of the 2021 Agreement, i.e.

A two-year plus one-quarter valuation period is equivalent to a 23/32 discount. Therefore, this court confirms...

The monetary value of the prior exemption clauses = the full value of the license fee paid during the 8-year prior period

$\times 9/32$

(ii) ZTE and Samsung Electronics' 2G-4G under the 2021 Agreement

Standard essential patent license single-model fee rate

The licensing period under this agreement is three years, from 2021 to 2023, and the licensed patents are...

Both parties' 2G-4G standard essential patents and some other patents do not cover any 5G.

Standard essential patents will be licensed, and the licensed products will be mobile terminals and infrastructure for both parties.

Facilities and equipment, net license fee is a one-time lump sum payment [REDACTED] as mentioned earlier,

The agreement does not include any consideration for the non-prosecution period in 2024, and previous waivers...

The period in question is from 2013 to 2020, and the value of previous exemptions is discounted by 23/32.

Since this agreement is a cross-licensing agreement, the net license fee is shared between ZTE and Samsung.

The difference in the amount of the one-way license fee payable by each party is based on the proposal of the parties.

The basic breakdown and calculation method reasonably assumes the royalty rate in each individual license fee.

The ratio between them (2G-4G is calculated as 1:1:8), and according to publicly available data

According to the sales revenue of each product in the database (see Appendix 1 for details and sales data),

The rates for ZTE's 2G-4G single-mode services are as follows: [REDACTED]

[REDACTED] Samsung Electronics' 2G-4G single-mode fee

The rates are respectively [REDACTED]

The court finds that the lower actual rate under the 2021 Agreement may be due to the agreement's...

As this was the first agreement signed and both parties were large licensing entities, the negotiation process was challenging.

This was due to factors such as the relatively large scale and the specific negotiation background between the two parties, but considering...

Taking into account the specific relationship between the 2024 Agreement and the 2021 Agreement, this

## Intellectual Property Finance

The court adopted the analysis of the 2021 Agreement.

(iii) Based on the 2G-4G standards of ZTE and Samsung Electronics during the agreement period

Calculation of changes in essential patent strength for ZTE and Samsung under the 2024 Agreement.

Star Electronics' 2G-4G single-mode rates

According to multiple publicly available 4G reports presented by the parties involved, in the "2021..."

When the annual agreement was signed, ZTE's 4G standard essential patents accounted for 8.4%.

Samsung Electronics holds 10.3% of the essential patents for 4G standards, while ZTE currently holds a similar percentage.

Samsung Electronics' 4G standard essential patents account for 8.9% of its total patents.

The profit share is 10.5%. Therefore, based on the changes in the 4G patent strength of both parties, [the following is a continuation of the previous sentence]..

The 4G single-mode tariff obtained from the breakdown of the 2021 agreement can be adjusted upwards accordingly.

The 4G single-mode rate will be applicable under the 2024 agreement. Meanwhile, due to the different standards for 2G and 3G...

The benchmark has been stable for many years, so it is reasonable to assume that ZTE and Samsung are currently...

The proportion of 3G and 2G patents in electronics compared to the proportion of patents at the time of signing the 2021 Agreement.

This is consistent with the agreement. Based on this, the applicable terms for ZTE under the 2024 Agreement are obtained.

The single-mode rates for 2G and 4G are respectively

Samsung Electronics' 2G-4G single-mode rates are as follows:

In addition, by

Since the two agreements are signed by the same parties and their global business operations are relatively stable, no further action is required.

Other adjustments.

(iv) 4G multi-mode communication between ZTE and Samsung Electronics under the 2024 Agreement

Rates

Considering the value weights of 4G, 3G, and 2G in a 4G multi-mode device are 8:1:1,

The weighted average yields ZTE's 4G network applicable to the 2024 agreement.

Multi-mode rate [REDACTED] Samsung Electronics' 4G multi-mode rates are...

Intellectual Property Finance  
[REDACTED]

#### V. Determination of 5G Standard Essential Patent Licensing Rates

##### (a) Calculation using the top-down method

The plaintiff used a top-down approach, with the overall formula being: 5G single-mode percentage.

Rate = 5G standard industry cumulative rate × 5G patent share × comprehensive regional discount;

5G multi-mode percentage rate = 5G single-mode percentage rate × 5G standard value weight

+4G multi-mode percentage rate × 2G-4G standard value weight. This method conforms to existing...

The top-down calculation method adopted in judicial practice was not supported by the defendant's explanation of the formula.

The court accepted the method provided by the plaintiff who raised questions and presented evidence to refute them.

##### 1. Confirmation of the cumulative licensing rate for 5G standards in this case.

In its previous judgment, this court, based on the evidence presented in the case, addressed the issue of smartphones.

The court determined the cumulative licensing fee rate for 5G standards across the industry. The defendant argued that the industry cumulative rate...

The licensing fee rate should be a relatively fixed value or a range of values; therefore, in this case, it should be...

The court will take into account the industry cumulative licensing fee rate determined in its prior judgment. The plaintiff, however, argues...

The relevant cumulative license fee rate should be calculated and determined on a case-by-case basis.

In this regard, this court holds that the findings of this court's prior judgment cannot be directly applied to this case.

The cumulative licensing rate for 5G standards needs to be determined on a case-by-case basis, taking into account the evidence in this case.

The specific reasons are as follows: First, the ideal standard generational industry cumulative licensing...

The rate should be a relatively fixed value or a range of values. However, due to generational differences in relevant standards...

The number of standard-essential patents involved is enormous, making it practically impossible to price each patent individually.

Furthermore, regardless of the method used to calculate the cumulative license fee rate, there is a certain...

The hypothetical conditions lead to discrepancies with reality. Therefore, in reality, relatively fixed standard values...

International industry cumulative rates are often determined through long-term commercial practice and by the majority of rights holders.

This process gradually takes shape after the statement is issued. The standard intergenerational industry cumulative rate is formed in this manner.

## Intellectual Property Finance

It possesses relative rationality, stability, and conforms to industry practices, and can be widely accepted by the industry.

Widely accepted, this should be adopted in individual litigation cases. Secondly, regarding the 5G standard...

There is currently no unified understanding of global cumulative licensing rates in the telecommunications industry.

In this case, the cumulative licensing fee rate for the 5G standard industry as determined in the prior judgment of this court,

This is solely based on the evidence presented and calculations of the parties involved to determine the conditions for granting permission in a specific case.

Intermediate data differs in function and formation from the aforementioned industry-recognized standards.

Industry cumulative licensing fee rates. Because the determination of relevant cumulative licensing fee rates has significant individual characteristics...

The factors involved in this case lack stability, and this court cannot directly adopt them in this case.

Use. Furthermore, the adjudication of different cases, the evidence presented by the parties involved, and the calculation methods...

The legal arguments and defenses differ, making it objectively impossible to calculate the same standard.

The intergenerational cumulative license fee rate, the range of values calculated by prior judgments, is also not subject to legal basis.

According to findings that can be binding on subsequent judgments. Fourth, with the continuous evolution of 5G standards.

In addition to the rapid commercialization of 5G technology, the parties in this case also provided [evidence/support] compared to previous judgments.

This provides more long-term and accurate measured data. Therefore, even in cases where separate judgments exist,

This does not affect the court's determination of the industry cumulative licensing fee rate based on the existing evidence in this case.

Finally, individual judicial rulings have certain guiding significance for industry practice.

If the standard intergenerational industry cumulative licensing fee rate determined by the individual case judgment can be obtained by the industry...

The widespread acceptance and use in industry practice can be transformed into industry-recognized and relatively stable [principles/methods].

The established cumulative licensing fee rate was subsequently accepted. However, in this case, the party did not provide such a rate.

Show no evidence to prove the cumulative 5G standard industry license established in this court's prior judgment.

The rates have been widely recognized and adopted in industry practice, and this situation does not exist.

The applicable circumstances. In conclusion, the court does not accept the defendant's above claims.

Based on the evidence on file, the calculation of the 5G standard industry cumulative factors involved in the licensing conditions of this case will be carried out.

The total license fee rate is determined comprehensively.

## Intellectual Property Finance

In this case, the plaintiff used the eigenvalue regression model commonly used in economics.

The contribution of the 5G standard to mobile phone prices relative to the 4G standard was calculated, based on the 5G standard.

Industry cumulative rate = (4G standard industry cumulative rate + 5G coefficient) × 4G and 5G

The formula for the ratio of average selling price of mobile phones is based on 4G during the period from 2019 to 2029.

Based on the average selling price of 5G mobile phones, a benchmark model was derived and robustness tests were performed.

The cumulative licensing rates for the 5G standard industry are 10.8%-11.6%.

7.8%-8.5%. From the perspective of favoring the defendant, the plaintiff in this case has grounds for...

-In 2023, the 5G standard industry cumulative tariff rate determined by this court's prior judgment was adopted.

The percentage ranged from 4.341% to 5.273%, and robustness checks were used to ensure the return on investment for the period from 2024 to 2029.

The 5G standard industry cumulative fee rate is 7.8%-8.5%. The defendant's specific claims against the plaintiff...

The plaintiff raised objections to the volume calculation scheme, including: the hedonic price regression model used by the plaintiff.

It is not robust; the results of its benchmark model and robustness tests differ significantly.

The issue of variable selection in the price regression model; the plaintiff's calculation of 4G and 5G mobile phones.

The issue of the time period selected for average selling price; average selling price of 4G and 5G mobile phones.

Problems regarding the calculation method of grid ratio.

In this regard, our court believes that, firstly, regarding the robustness of the hedonic price regression model.

The plaintiff's robustness test conservatively added the "processor model" variable.

To control the situation where control is still unavailable even when the model includes other processor-related variables, because

The impact of processor model on mobile phone prices is due to factors that are not directly observable.

The difference between its 5G coefficient and the one calculated by the benchmark model is due to changes in variables.

The difference in results is insufficient to demonstrate that the model itself lacks robustness. Secondly, regarding...

Regarding the variable selection problem in the eigenvalue regression model, this court holds that the plaintiff's...

The hedonic price regression model has controlled for numerous variables and employs time fixed effects and product-specific effects.

Dr. Huang Kun controlled for brand fixed effects and country fixed effects, and examined the variables.

## Intellectual Property Finance

Both selection and exclusion were explained reasonably, minimizing the possibility of omissions.

Estimation bias caused by quantity or repeated variables. Dr. Deng Fei's rebuttal...

The document does not adequately analyze the unreasonable considerations or omitted variables in its claims.

The plaintiff provided explanations and data to support their claim, and the court determined that the plaintiff's actions in the hedonic price regression model were flawed.

The variables used are reasonable. Third, regarding the average sales of 4G and 5G mobile phones...

The time period and calculation formula for price measurement. This court believes that the period from 2019 to 2029...

The 5G technology lifecycle is spanning 10 years, and this is the core period for the licensing fees involved in the agreement in this case.

During the calculation period, compared to 2025-2029, the average mobile phone usage during that period...

A more reasonable approach would be to calculate the price. Fourth, regarding the average sales of 4G and 5G phones...

The issue of how to calculate the ratio of selling price. Although Dr. Deng Fei advocates that it should be calculated year by year first.

The ratio of the average selling price of 4G and 5G mobile phones each year, and then based on the annual price of 4G mobile phones...

The ratio is obtained by weighting sales volume, but this method cannot overcome the limitations of applying it to a few years.

The problem of assigning excessive weight to outlier values, leading to numerical bias, is addressed by...

In other words, Dr. Huang Kun first calculated the total sales from 2019 to [the present] using a weighted average method.

The method for recalculating the ratio of the average selling prices of 4G and 5G mobile phones between 2029 is more...

It is reasonable.

In conclusion, this court finds that the calculation scheme in the plaintiff's economic report is reasonable.

The court accepts the reasonable explanations provided by the defendant regarding the relevant issues raised.

Having made every effort to control for errors caused by relevant variables, this court adopts the plaintiff's conservative calculation method.

Based on the results, the cumulative licensing fee rate for the 5G standard industry in this case was determined to be...

7.8%-8.5%. Given that the plaintiff acted in a manner favorable to the defendant, from 2019 to 2023...

The court advocates for a cumulative licensing rate of 4.341%-5.273% for industries applying 5G standards.

The plaintiff's request is respected and accepted.

2. The proportion of global 5G standard essential patent strength of both the plaintiff and the defendant.

## Intellectual Property Finance

In cases involving a large number of licensed patents, and where there is no evidence to prove the quality of the patents involved.

In cases where there are significant differences, using the number of patent declarations as a measure of patent strength percentage is appropriate.

The argument has some merit, and this court acknowledges it. In this case, the plaintiff, ZTE Corporation, through...

It collected 10 publicly available 5G reports from third-party companies, using voice...

The essential patent family data is disclosed, and the relevant values from each report are averaged to obtain...

ZTE's share of global 5G standard essential patents is 7.7%, while Samsung Electronics...

The company holds 8.7% of the essential 5G global standards patents. The defendant did not dispute this.

This court confirms it.

3.2G-5G generation technology's value contribution in 5G multi-mode terminal products

Because 5G multi-mode terminal products incorporate different generations of wireless communication technologies,

When calculating licensing rates for 5G multi-mode terminal products, it is necessary to consider different generations of technology.

The proportion of value contribution. In this case, the parties believe that currently in the telecommunications industry...

There is no unified understanding in the industry regarding the value weight of each generation in 5G multi-mode.

In a prior case heard by the court, the evidence submitted by both parties and the principal...

Zhang determined the value weight of 5G technology in the early stages of its introduction into smartphones as follows:

The ratio was 50:40:5:5, but with the commercial evolution of 5G technology, 5G technology is gradually entering...

In the mature stage, the value of 5G standards in 5G multi-mode terminal products becomes more significant, therefore...

The focus has changed. The plaintiff claims that the 5G products sold by both parties between 2019 and 2023 have been subject to further changes.

For end products, a value weighting of 50:40:5:5 applies, targeting both parties in 2024.

- 5G terminal products sold between 2020 and 2029 are subject to a value weight of 70:24:3:3.

The court finds that the evidence cited by the parties concerns 4G and 5G technologies.

The technology and its current development status were comprehensively showcased, which basically illustrates the further advancement of 5G technology.

This has expanded the industrial application areas of communication technology, and with the rapid commercialization of 5G,

5G standards are developing rapidly, and this is being combined with publicly released mobile data from Ericsson.

Intellectual Property Finance

Analysis revealed that the 2024 Agreement will cover the period from 2024 to 2029.

In 5G multi-mode terminal products, the relative value weight of the 5G standard should be greater than that of the introduction of 5G technology.

A significant initial improvement was observed. Furthermore, Dr. Deng Fei, the defendant's economics expert, stated in his report...

China also believes that during the period covered by the 2021 Agreement, 5G multi-mode products, 5G,

The 4G, 3G, and 2G standards should be weighted at a value of 50:40:5:5 by 2025.

By 2029, the weight of 5G in 5G multi-mode products will be further increased, including 5G...

The 4G and 3G standards should be weighted 8:1:1 in terms of value. Therefore, given that both parties agree...

However, the value weights of different generations have changed over different periods, and the value weights of 5G standards have also changed.

The weighting has increased, and both sides have a different understanding of the numerical proportions of intergenerational weighting in different periods.

The proportions are close, therefore, regarding the period from 2019 to 2023, which both parties agree to...

And the court will apply different value contribution percentages for the period from 2024 to 2029.

To support.

In summary, this court determines that the 5G multi-mode terminal products involved in this case are subject to the following penalties:

The value contribution of 4G, 3G, and 2G technologies during the initial stage of 5G introduction (2019-2023)

A weighting of 50:40:5:5 is applicable during the 5G maturity period from 2024 to 2029.

The weights are 70:24:3:3.

4. Specific comprehensive regional discounts applicable to both parties in this case.

The plaintiff argues that global patent weighting is typically used in global licensing negotiations.

The value of the relevant patents of both parties is considered to determine the global royalty rate. In this case, the relevant patent values are assessed.

Considering the patent portfolio of the patentee and the geographical distribution of the production and sales of the implementer in this case.

The plaintiff, regarding the regional discounts demanded by the defendant during negotiations and litigation, [made a ruling].

The plaintiff agrees to provide a comprehensive regional discount applicable only to the parties involved in this case.

The comprehensive regional discount is based on economic factors, the patent portfolios of both parties, and production and sales.

Sales data divided the world into three regions, with the first region having a GDP per capita greater than [missing information].

## Intellectual Property Finance

Or equivalent to developed countries and regions with a value of US\$20,000 or more; the second region is mainland China.

The third region comprises other developing countries and regions. This is weighted by regional sales percentage.

In calculating the regional adjustment coefficient, the plaintiff also determined the region based on the production locations of both parties.

Based on the minimum standard of the domain adjustment coefficient, the plaintiff calculated the "2024"

During the license period of the agreement, a comprehensive regional discount applies to ZTE's global rates.

The at [redacted] global rate discount for Samsung Electronics is [missing information]. [redacted]

The defendant did not object to the application of the comprehensive regional discount during the court hearing, but only to...

The plaintiff challenged its calculation formula, arguing that the plaintiff's calculation of regional patent strength...

The total number of patent families in the industry region was incorrectly used instead of the total number of global patent families in the industry.

The denominator leads to an overestimation of the calculated regional patent strength and regional adjustment coefficient.

high.

The court holds that, when assessing regional patent strength, the patentee's regional patents

The numerator and denominator in the quota calculation formula should use a uniform statistical scale. If global quotas are used...

The total number of patent families is used as the denominator, and the total number of regional patent families held by patent holders is used as the numerator.

This could lead to a mismatch between the numerator and denominator. The defendant claims that the total number of global patent families...

The number is used as the denominator because the value of all technologies needs to be considered, but in reality, it is for the full...

To obtain technology consideration, the rights holder is required to apply for related technologies in all countries and regions worldwide.

The patent lacks both rationality and practical feasibility. If applied to the defendant's jurisdiction over the region...

The calculation logic for patent strength will result in all patent holders being weighted by region.

The patent share is significantly discounted relative to its global patent share. Therefore, this court holds that the defendant...

The plaintiff's corresponding objections to the plaintiff's claims are unfounded, and the plaintiff's calculations are applicable to...

The combined regional discount on global 5G rates for the specific parties in this case is reasonable.

The court accepts the validity of the data, meaning that the comprehensive application of ZTE's global rates is applicable to this case.

The regional discount [REDACTED] comprehensive regional discount applicable to Samsung Electronics' global rates.

## Intellectual Property Finance

### 5. 5G single-mode and 5G multi-mode tariffs between the two parties under the 2024 Agreement

Substituting the values confirmed by this institute into the basic formula of the top-down method, we obtain:

ZTE's 5G single-mode pricing from 2019 to 2023 [REDACTED]

5G single-mode tariff from 2024 to 2029 [REDACTED] Samsung Electronics

The 5G single-mode tariff rate from 2019 to 2023 [REDACTED] 2024-2029

The annual 5G single-mode fee rate is [REDACTED] ZTE Corporation in 2019-2023

The 5G portion of the annual 5G multi-mode tariff is... [REDACTED] 2024-2029

The 5G multi-mode fee rate was 0.271%-0.294% in 2019-2023. Samsung Electronics...

The 5G portion of the annual 5G multi-mode tariff is... [REDACTED] 2024-2029

The annual 5G multi-mode fee rate is 0.379%-0.415%.

(ii) Calculation according to the comparable agreement method

#### 1. ZTE's dismantling of the "Samsung Electronics-Nokia Agreement" has relatively...

Reasonable and can be adopted.

This court considers the "Samsung Electronics-Nokia Agreement" as the essential patent for the 5G standard in this case.

Comparable licensed agreements. ZTE conducted corresponding breakdown calculations, which revealed its...

The calculation method is as follows: First, by disassembling the "Samsung Electronics Nokia Agreement"...

Under the agreement, Samsung Electronics actually paid Nokia... [REDACTED]

[REDACTED] Second, combining publicly available data from ZTE and Samsung...

The relative value of the patent portfolio of the company and the patent portfolio of Nokia, based on the above breakdown.

The fee rate is adjusted appropriately according to the relative proportion of patent strength to estimate the applicable rate.

5G single-mode tariffs for ZTE and Samsung Electronics under the 2024 Agreement;

Third, from the perspective of favoring the defendant. [REDACTED]

[REDACTED] Ultimately, the breakdown revealed ZTE's 5G single-mode tariff. [REDACTED]

Intellectual Property Finance

Samsung Electronics' 5G single-mode tariff [REDACTED] fourth, calculate 2019.

- 5G multi-mode rates for 2023 and the period from 2024 to 2029, targeted

ZTE's patents from 2019 to 2023 regarding 5G multi-mode pricing, specifically the 5G portion of the pricing.

The 5G multi-mode rates for 2024-2029 are as follows: [REDACTED]

[REDACTED] Regarding Samsung Electronics' patents for 5G multi-mode from 2019 to 2023

The 5G portion of the tariff and the 5G multi-mode tariff for 2024-2029 are respectively...

for [REDACTED]

The defendant questioned the plaintiff's disassembly, arguing that the plaintiff's disassembly process... [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

This court holds that, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

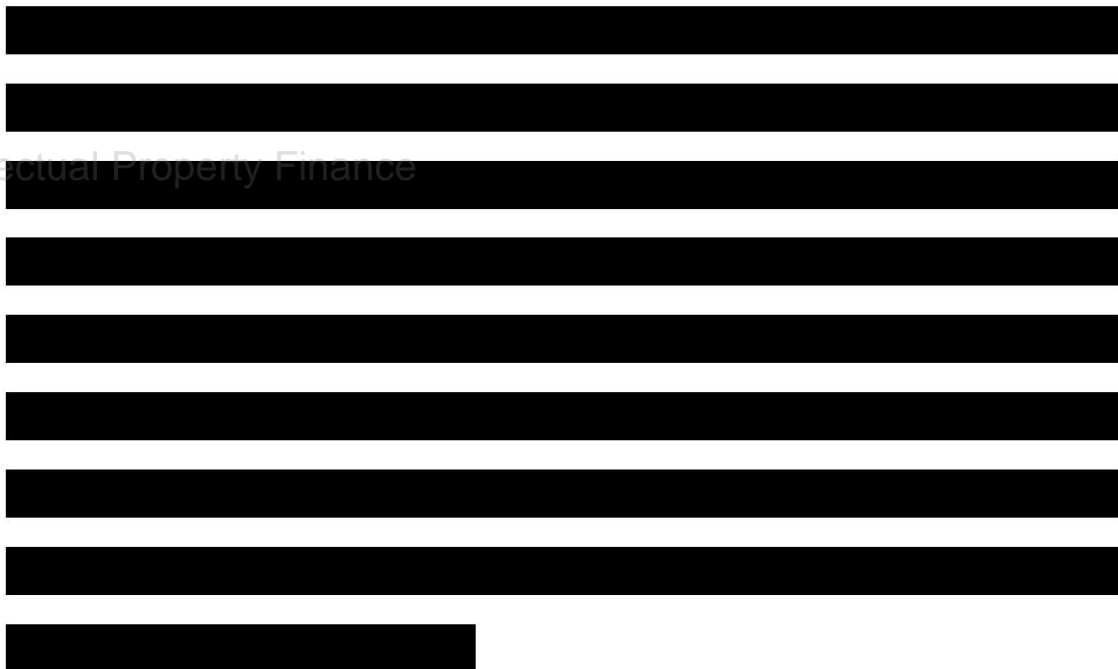
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Intellectual Property Finance



In summary, the plaintiff's comparable agreement method for 5G standard essential patent licensing rates is specific.

The body disassembly calculation has a reasonable basis, and this court adopts it in accordance with the law.

2. Samsung's comparable protocol teardown results and specific teardown methods are not...

Accepted

First, Samsung's comparable agreement teardown method is applied to the 2021 Agreement.

The ZTE-Apple 2020 Agreement involves a mixed disassembly of 2G to 5G technologies, without...

The separate legal provisions cannot be directly applied to the 2021 agreement covering 2G to 4G.

The 5G teardown calculations for the Samsung Electronics-Nokia agreement are underway. Furthermore, given that this court has already confirmed...

The 2021 agreement only applies to comparable dismantling of 2G to 4G networks, according to ZTE.

The Apple 2020 Agreement is not comparable to this case, therefore its disassembly results are also irrelevant.

The law was accepted by this court.

Secondly, Samsung's disassembly method itself has fundamental flaws, lacking...

There is a lack of reasonable basis. First, Dr. Deng Fei's calculations were based on products licensed by Samsung Electronics.

Product sales location segmentation calculation includes regional patent strength, multi-modal weighting, and various categories and

The intergenerational licensing of product sales was weighted using a "triple weighting" method, which is applicable to the industry.

The method lacks practical feasibility. Furthermore, it only considers the place of sale for calculating patents.

The assessment of capabilities overlooks the implementation of patents in production and other stages, which is biased. Furthermore,

Intellectual Property Finance

When calculating regional patent strength, Dr. Deng Fei will take the number of regional patents as the numerator and...

The denominator is based on global patent counts, leading to inconsistencies in statistical methods. Secondly,

Dr. Deng Fei's decomposition formula is based on a key assumption that lacks reasonable basis.

Furthermore, they failed to provide supporting evidence. Specifically, regarding the dismantling of the 2021 agreement...

The timeline assumes that ZTE's cross-generational hybrid licensing rates under the new and old agreements are...

The ratio equals the ratio of ZTE's combined patent strength under the new and old protocols. (In dismantling...)

When resolving other agreements such as the "ZTE-Apple 2020 Agreement," regardless of the same...

Whether it's the rights holders of a cross-licensing agreement or the rights holders of different agreements, Deng...

Dr. Fei directly assumed that the ratio of its intergenerational mixed one-way premium rate was equal to its

The ratio of cross-generational mixed patent strength. However, cross-generational patent strength and cross-generational...

The only premise for equating international licensing rates is the cumulative industry fee across all generations.

The premise that all rates are the same contradicts industry practice, and Dr. Deng Fei did not address this.

Provide reasonable explanations or supporting evidence.

It is worth noting that during the litigation process, Samsung's most recent move was in October 2025.

The new cross-licensing offer has reached [REDACTED] The quoted amount is higher than that in this case.

The range of values obtained from the comparable protocol decomposition method advocated by China (including supplementary settings).

high [REDACTED] Samsung stated that its latest offer was made to "resolve the dispute."

"With goodwill in mind," considering Samsung's role as the global licensing entity.

Having extensive experience in licensing negotiations and litigation, one should know that regardless of licensing negotiations...

The price quoted during the process or the specific calculation of the license fee in licensing terms litigation.

All spaces should adhere to the FRAND principle. In the absence of other reasonable grounds, this...

The court finds it difficult to agree with the negotiating price quoted by one party at the same time and the dismantling plan claimed in the litigation.

The reason why the calculation results show such a huge price difference is simply due to "dispute resolution".

"Good faith purpose," while also considering the comparable agreement claimed by Samsung in this case.

Intellectual Property Finance

The breakdown calculation results cannot be used as an appropriate FRAND net license fee range for this case.

The circumstances corroborate the court's conclusion that it does not accept the dismantling calculation method and results.

It is reasonable.

Given that the defendant's disassembly method is not directly applicable and has fundamental flaws,

Given that the plaintiff's calculation method is relatively reasonable and accepted by this court, this court will no longer...

Consider using the defendant's comparable agreement breakdown calculation method and results.

VI. The net licensing fee amount recognized by this court under the 2024 Agreement between the two parties.

(a) 2G-4G single-mode rates and 4G rates under the 2024 Agreement

Multi-model rates

ZTE's standard essential patents apply to 2G, 3G, and 4G single-mode rates respectively.

for [REDACTED] Samsung Electronics

The applicable rates for 2G, 3G, and 4G single-mode services for the sub-standard essential patents are as follows:

[REDACTED]

The applicable 4G multi-mode tariff for ZTE's standard essential patents is...

[REDACTED] Samsung Electronics' standard essential patents apply to 4G multi-mode tariffs.

for [REDACTED]

(ii) 5G single-mode and 5G multi-mode tariffs between the two parties under the 2024 Agreement

1. Results calculated using the top-down method:

ZTE's standard essential patents apply to 5G single-mode from 2019 to 2023.

The rate is [REDACTED] 5G single-mode tariff from 2024 to 2029

[REDACTED] Samsung Electronics' standard essential patents apply from 2019 to 2023.

The annual 5G single-mode fee rate is [REDACTED] 5G single-mode from 2024 to 2029





Consistent with 2024, sales figures for both parties' products for 2025-2029 were obtained.

Sales revenue. Specifically, for mobile terminal products, the plaintiff claims a 75% share.

## Intellectual Property Finance

Convert the retail price of mobile phones based on Canalys data into a net selling price and compare it with the price of mobile phones.

The net selling price of the device was capped at \$400 per unit, while the defendant argued that it should be based on Samsung's pricing.

The wholesale price to retail price ratios for ZTE and its subsidiary, Zigong, were 71% and 74%, respectively.

Conversion. Considering that the conversion ratios of both parties are close, and using the net selling price to calculate the conversion is in line with the interests of both parties.

Given the facts of the negotiation and the fact that the net selling price cap set by the plaintiff is more advantageous to the defendant, this court finds...

The plaintiff's calculation method is adopted. For non-mobile terminal devices, the plaintiff's calculation method is...

IDC data statistics cover wearable products, laptops, and tablets.

Total sales of computer products during the period from 2019 to the second quarter of 2024 compared to both parties

The ratio of total mobile phone sales during the same period. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Based on this, multiply it by the statistical data from Canalys.

Mobile phone sales figures adjusted for net selling price and capped selling price for both parties between 2019 and 2024

Sales figures were estimated. Given that the plaintiff's aforementioned data has already been presented during the court proceedings...

The plaintiff's opinion was adjusted, and this court adopts it. Furthermore, based on the fact that both parties...

A 10% annual discount rate is set for future sales revenue, and this court will consider discounting in the corresponding calculations.

The rates and specific values were accepted. The plaintiff did not include past licensing fees in its calculations in this case.

The method of interest calculation is favorable to the defendant, and this court approves it. (2019-2023)

During the year, both parties' 4G terminal products and 4G base station products were subject to the "2021 Agreement".

Overwrite, and do not recalculate.

In conclusion, this court determines that the sales of licensed products covered by the 2024 Agreement are subject to the following conditions.

Sales figures are shown in the table below:

| Product Type    |                      | Sales from 2019 to 2023 | Sales from 2024 to 2029 |
|-----------------|----------------------|-------------------------|-------------------------|
|                 |                      | Amount (in US dollars)  | Amount (in US dollars)  |
| Samsung         | 5G terminal products |                         |                         |
|                 | 4G terminal products |                         |                         |
|                 | 5G base station      |                         |                         |
|                 | 4G base station      |                         |                         |
| ZTE Corporation | 5G terminal products |                         |                         |
|                 | 4G terminal products |                         |                         |
|                 | 5G base station      |                         |                         |
|                 | 4G base station      |                         |                         |

(iv) Net license fees payable by the defendant to the plaintiff under the 2024 Agreement

1. Net license fee ranges obtained by each calculation method

(1) 2G-4G rates broken down from the 2021 Agreement and top-down

Net license fee range for 5G rates under the agreement: Samsung under the 2024 Agreement

The net license fee payable by the company to ZTE in a one-time payment is between US\$717 million and US\$787 million.

(2) 2G-4G tariffs and comparable agreements broken down from the 2021 Agreement

The net license fee range for 5G under the law is as follows:

Intellectual Property Finance

[REDACTED]

2. The amount Samsung is required to pay under the 2024 Agreement as determined by this Court.

Net license fee to ZTE

The court finds that the numerical values obtained from the above calculations are all basically within the range of the plaintiff's main...

Above Zhang's one-time net payment, the amount that can support the plaintiff's claim is reasonable.

Therefore, based on the parties' claims, this court determines that the clause in the "2024 Agreement" in this case is invalid.

Samsung will pay ZTE a one-time net licensing fee of US\$731 million.

In conclusion, according to Article 5 and Article 6 of the Civil Code of the People's Republic of China, Yuan.

Articles 6, 7, 464, 465, and 400

Article 69, Paragraph 1, Application of Law in Foreign-related Civil Relations of the People's Republic of China

Articles 8, 10(1), and 41 of the Law of the People's Republic of China

According to Article 67, Paragraph 1, and Article 145 of the Civil Procedure Law,

The judgment is as follows:

The plaintiffs are ZTE Corporation and ZTE Corporation Limited.

The company's Chongqing branch, the defendant Samsung Electronics Co., Ltd., and the defendant Samsung (China)

Investment Co., Ltd., and the defendant Samsung (China) Investment Co., Ltd. Chongqing Branch

The licensing of standard-essential patents involved by both parties shall be determined under the following conditions:

## Intellectual Property Finance

1. Licensing standards: 2G, 3G, 4G, and 5G wireless communication standards;
2. Licensed Patents: Plaintiff ZTE Corporation, Plaintiff ZTE...

Chongqing Branch of Xun Co., Ltd. and defendant Samsung Electronics Co., Ltd., defendant

Samsung (China) Investment Co., Ltd., and the defendant Samsung (China) Investment Co., Ltd.

The Chongqing branch of the company owns and has the right to license 2G, 3G, 4G, and 5G wireless communication technologies.

Standard essential patents;

3. License period: January 1, 2025 to December 31, 2029;

4. Licensed Products: Mobile terminals and infrastructure equipment of both parties, but excluding...

Except for 6G or higher generation products;

5. Payment of License Fees: Defendant Samsung Electronics Co., Ltd., Defendant Samsung (China)

Samsung (China) Investment Co., Ltd. Chongqing Branch, the defendant

The company should pay the plaintiff ZTE Corporation and the plaintiff ZTE Corporation Limited

The Chongqing branch of the limited company paid a one-time net licensing fee of US\$731 million.

The funds include 2G-5G tenders from January 1, 2024 to December 31, 2029.

Cross-licensing fees for quasi-essential patent licenses, from January 1, 2019 to 2023

Cross-licensing fees for past portions of 5G standard essential patent licenses as of December 31.

The case acceptance fee of RMB 1,000 shall be borne by the defendant, Samsung Electronics Co., Ltd.

Defendant Samsung (China) Investment Co., Ltd., Defendant Samsung (China) Investment Co., Ltd.

The Chongqing branch of the limited company shall jointly bear the costs.

If you disagree with this judgment, the plaintiff ZTE Corporation and the plaintiff ZTE...

Chongqing Branch of Telecommunications Corporation, and Samsung (China) Investment Co., Ltd.

The company and the defendant, Samsung (China) Investment Co., Ltd. Chongqing Branch, may be subject to judgment.

Within fifteen days from the date of service of the document, the defendant, Samsung Electronics Co., Ltd., may submit the judgment.

Within thirty days from the date of service, the appeal petition shall be filed with this court, and the opposing party shall comply with the appeal petition.

Intellectual Property Finance

The number of people involved submitted copies of the appeal to the Supreme People's Court of the People's Republic of China.

Presiding Judge Fan Wenyan

Judge Zhang Yan

Judge

Xiao Yao



May 1, 2026

本件与原本核对无异




Judge Assistant Tian Song

Judge Assistant Zhang Yanjiao

Clerk Zhou Xin

Appendix: List of Evidence from Both Parties

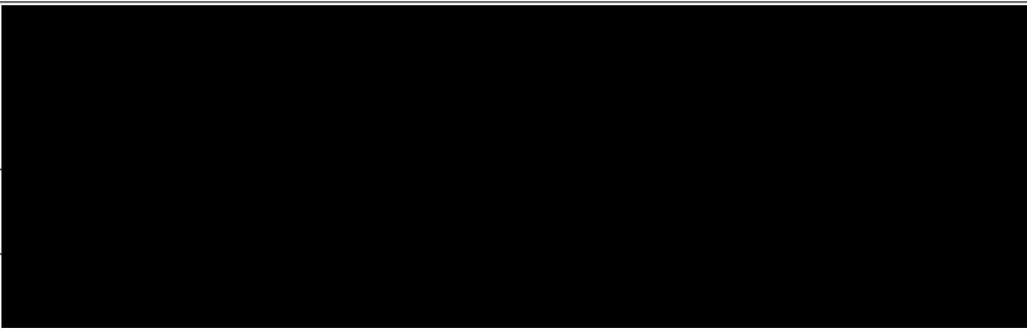
Plaintiff's Evidence List

| sequence<br>Number | Evidence Name                                                                                                                                                                                                                                                               |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                  | Regarding the "Intellectual Property Information" concerning certain standard-essential patents owned by the plaintiff<br><br>Statement of Claims and License and Appendix to the Statement of Claims of Intellectual Property Information and its parts<br><br>Translation |
| 2.                 | Exemplary proof of ownership of the standard essential patents owned by the plaintiff                                                                                                                                                                                       |
| 3.                 | Baidu Baike entry on the 2018 US sanctions against ZTE.                                                                                                                                                                                                                     |
| 4                  |                                                                                                                                                                                          |
| 5                  | ZTE Corporation on March 8, 2017, April 20, 2018, and 2018<br><br>Hong Kong Stock Announcements on May 9, 2018 and June 12, 2018                                                                                                                                            |
| 6                  |                                                                                                                                                                                         |
| 7                  |                                                                                                                                                                                         |
| 8.                 | Relevant content from ZTE Corporation's 2018 Annual Report                                                                                                                                                                                                                  |
| 9.                 | Relevant content from ZTE Corporation's 2019 Annual Report                                                                                                                                                                                                                  |
| 10.                | Relevant content from ZTE Corporation's 2020 Annual Report                                                                                                                                                                                                                  |
| 11.                | Relevant content from ZTE Corporation's 2021 Annual Report                                                                                                                                                                                                                  |
| 12.                | Can ZTE "Rejuvenate" by Raising Billions to Develop 5G?                                                                                                                                                                                                                     |
| 13.                | ZTE Corporation: Despite having 40 billion yuan in cash reserves, the company is still short of funds for operations.                                                                                                                                                       |
| 14.                | Relevant content from ZTE Corporation's 2014 Annual Report                                                                                                                                                                                                                  |

|     |                                                                                                                                                                                                                                                                                                                                                                               |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15  | <p>Samsung filed a lawsuit in its U.S. lawsuit involving a licensing terms dispute with Ericsson.</p> <p>The opinions submitted and their partial Chinese translations</p>                                                                                                                                                                                                    |
| 16  | <p>Samsung filed a lawsuit in its U.S. lawsuit involving a licensing terms dispute with Ericsson.</p> <p>Professor Kong Xiangjun's testimony</p>                                                                                                                                                                                                                              |
| 17  | <p>Samsung filed a lawsuit in its U.S. lawsuit involving a licensing terms dispute with Ericsson.</p> <p>Testimony of Randall R. Rader and its partial Chinese translation</p>                                                                                                                                                                                                |
| 18  | <p>Press release: "Samsung loses arbitration over FRAND licensing fees with Interactive Digital"</p> <p>The lawsuit requires an additional 67% fee: This comes at a time when a global standards negotiation with ZTE is underway.</p> <p>"During a dispute, the timing was unfavorable" - timestamp preservation documents and parts of Chinese text.</p> <p>Translation</p> |
| 19  | <p>Interactive Digital's 2024 10-K Report Timestamp Preservation Documents</p> <p>and some Chinese translations</p>                                                                                                                                                                                                                                                           |
| 20  | <p>InterDigital's 2020 10-K report timestamp preservation document</p> <p>and some Chinese translations</p>                                                                                                                                                                                                                                                                   |
| 21  | <p>Zheshang Securities' In-Depth Report on ZTE Corporation: An Undervalued Global ICT Leader</p> <p>enterprise"</p>                                                                                                                                                                                                                                                           |
| 22. | ZTE Corporation 2020 Cash Flow Report (ZhiZeHua)                                                                                                                                                                                                                                                                                                                              |
| 23. | ZTE Corporation 2021 Cash Flow Report (ZhiZeHua)                                                                                                                                                                                                                                                                                                                              |
| 24  | <p>Excerpt from the first-instance judgment in the Lenovo v. Interactive Digital case, FRAND, and its Chinese translation.</p> <p>([2023] EWHC 539 (Pat))</p>                                                                                                                                                                                                                 |
| 25  | <p>Excerpt from the first-instance FRAND judgment in the Wireless Planet v. Huawei case and its Chinese translation</p> <p>([2017] EWHC 711 (Pat))</p>                                                                                                                                                                                                                        |

|     |                                                                                                                                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 26  | <p>IDC Releases 2020 Full-Year Smartphone Shipment Report: Xiaomi and Huawei</p> <p>vivo enters TOP5</p>                                                                                  |
| 27  | <p>Global smartphone revenue surpassed \$448 billion in 2021, according to Apple's Q4 report.</p> <p>Market share hits a new high</p>                                                     |
| 28  | <p>Apple accounted for 75% of the global mobile phone market's operating profit in the second quarter of 2021.</p> <p>Run</p>                                                             |
| 29. | "Apple and Qualcomm Fight 50 Lawsuits Globally: Who Has the Advantage?"                                                                                                                   |
| 30. | Patent War Erupts in the Telecommunications Field                                                                                                                                         |
| 31  | <p>Ericsson and Apple sign global patent licensing agreement after hearing on Monday and settling on Friday.</p> <p>protocol"</p>                                                         |
| 32  | <p>The first instance of the "Huawei" and "Samsung" patent infringement case found that "Samsung" maliciously infringed upon Huawei's patents.</p> <p>Intention to delay negotiations</p> |
| 33  | <p>Optis v. Apple, second instance judgment (Case No.: [2025] EWCA Civ 552)</p> <p>and its Chinese translation</p>                                                                        |
| 34  | <p>Olympic-themed Samsung Galaxy S21 unveiled! Snapdragon 888 flagship.</p> <p>Processor</p>                                                                                              |
| 35. | Xiaomi phones surge into the top three! Shaking Japan's "Apple faith"                                                                                                                     |
| 36. | NTT DOCOMO of Japan announces selection of Samsung as its 5G network supplier.                                                                                                            |
| 37. | Samsung Expands Collaboration with NTT DOCOMO on 5G Open RAN Deployment                                                                                                                   |
| 38  | <p>Samsung and NTT DOCOMO have partnered to research AI applications in 6G networks.</p> <p>Applications in the Internet</p>                                                              |
| 39. | "Driven by Innovation: How Samsung Electronics Beijing Research Institute Achieves Research and Development Goals"                                                                        |

|     |                                                                                                                                                                                             |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Is it a transformation?                                                                                                                                                                     |
| 40. | Industry Frontiers: Samsung's Latest Technological Achievements in 5G                                                                                                                       |
| 41  | "5G Algorithm Engineer Recruitment - Samsung Electronics China Research Institute"<br><br>Hiring                                                                                            |
| 42  | Job Description of 4G/5G Algorithm Engineer - Samsung Electronics China Research Institute<br><br>Job Requirements for 4G/5G Algorithm Engineers in 2025                                    |
| 43  | "Can't it do without China? Foreign media: Samsung produces 67 million mobile phones in China."<br><br><small>Accounting for 25% of the global market</small>                               |
| 44. | Dr. Huang Kun's Economics Expert Report (Part 1)                                                                                                                                            |
| 45. | A Child's First Testimony                                                                                                                                                                   |
| 46. | ZTE and Samsung's 2021 Patent Licensing Agreement and its translation                                                                                                                       |
| 47  | ZTE is negotiating a 2021 agreement with Samsung (and Innovius).<br><br>Partial historical documents of the negotiations and their Chinese translations                                     |
| 48  | ZTE and Samsung have exchanged standard essential patents related to wireless communication standards.<br><br>Emails and translations related to licensing negotiations                     |
| 49  | Samsung filed a countersuit against ZTE in the Frankfurt Regional Court in Germany.<br><br>Excerpt from the complaint in the antitrust lawsuit and partial Chinese translation              |
| 50  | Samsung filed a lawsuit against ZTE in the U.S. District Court for the Northern District of California.<br><br>Excerpt from the antitrust lawsuit complaint and partial Chinese translation |
| 51  | A provisional ruling by a British court in the lawsuit between Samsung and ZTE.<br><br>The licensing ruling and its Chinese translation                                                     |
| 52. | Samsung's "Samsung vs. ZTE" lawsuit filed in the U.S. case against ZTE.                                                                                                                     |

|     |                                                                                                                                                                                                                                            |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Xingtong's motion to dismiss the lawsuit and suspend the discovery proceedings<br><br>Excerpt from "The Discussion" and partial Chinese translation                                                                                        |
| 53  | Samsung's amendment to its lawsuit in the UK with ZTE<br><br>Request for application and its translation                                                                                                                                   |
| 54  | The tripartite correspondence regarding Samsung's ETSI complaint and its contents<br><br>Translation                                                                                                                                       |
| 55. | Dr. Huang Kun's Economics Expert Report (Part 3)                                                                                                                                                                                           |
| 56. | The Second Testimony of Childlike Innocence                                                                                                                                                                                                |
| 57  |                                                                                                                                                         |
| 58  |                                                                                                                                                                                                                                            |
| 59  |                                                                                                                                                                                                                                            |
| 60  | Tripartite correspondence and translations regarding Samsung's ETSI complaint.<br><br>(Supplementary letter as of October 17, 2025)                                                                                                        |
| 61. | Preliminary injunction issued by the First Regional Court of Munich, Germany                                                                                                                                                               |
| 62  | ZTE and Samsung have exchanged standard essential patents related to wireless communication standards.<br><br>Emails and translations related to licensing negotiations (as of October 26, 2025)<br><br>(Supplementary email from the day) |
| 63. | Patent Licensing Agreement Signed Between ZTE and Tinno                                                                                                                                                                                    |
| 64. | Patent Licensing Agreement Signed Between ZTE and Xiaomi                                                                                                                                                                                   |
| 65. | Patent Licensing Agreement Signed Between ZTE and Apple                                                                                                                                                                                    |
| 66. | Chinese translation of the patent licensing agreement signed between ZTE and Apple                                                                                                                                                         |

|     |                                                                                                                                   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------|
| 67. | Dr. Huang Kun's Economics Expert Report (Part Two)                                                                                |
| 68  | Key clauses of the patent licensing agreement signed between Samsung and Ericsson in 2021<br>Chinese translation of the document  |
| 69  | Key clauses of the patent licensing agreement signed between Samsung and Nokia in 2023<br>Chinese translation of the document     |
| 70  | Key aspects of the patent licensing agreement Samsung signed with Interactive Digital in 2025<br>Chinese translation of the terms |
| 71. | Patent licensing agreement signed between Samsung and Ericsson in 2021                                                            |
| 72. | Patent licensing agreement signed between Samsung and Nokia in 2023                                                               |
| 73. | Patent licensing agreement signed between Samsung and Interactive Digital in 2025                                                 |
| 74. | Dr. Huang Kun's Economics Expert Report (Part Four)                                                                               |

## Defendant's Evidence List

| Serial Number | Evidence Name                                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------------------------------------|
| 1             | Samsung Electronics and ZTE signed a patent licensing agreement in 2021.<br>The Suspension and Stall Agreement and its annexes |
| 2.            | Emails exchanged during the licensing negotiation process and their Chinese translations                                       |
| 3             | The UK High Court Patent Tribunal's judgment of 24 March 2025 and its<br>Chinese translation                                   |
| 4             | The UK High Court Patent Tribunal's judgment of 25 June 2025 and its<br>Chinese translation                                    |

|     |                                                                                                                                               |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5   | The UK High Court Patent Tribunal's order of 26 June 2025 and its contents<br><br>Translation                                                 |
| 6   | Samsung files complaint with ETSI alleging ZTE is a "non-bona fide licensor".<br><br>News reports                                             |
| 7   | ETSI Intellectual Property Policy and its partial Chinese translation                                                                         |
| 8   | Letter from Samsung Electronics to Judge Mailer, UK, dated June 9, 2025                                                                       |
| 9.  | Legal opinion from Professor Miguel of Brazil                                                                                                 |
| 10  | TIM Company Statement                                                                                                                         |
| 11  | Brazilian court suspends temporary injunction ruling                                                                                          |
| 12  | ZTE Evidence 2: Exemplary Patent ZL201710056532.0 ("ZTE Exemplary Patent")<br><br>The publication text of the exemplary patent (CN108288966B) |
| 13  | ZTE Exemplary Patent Publication Text CN108288966A                                                                                            |
| 14  | Statement of Opinion on Invalidation Request Involving ZTE's Exemplary Patent (Case)<br><br>Part Number: 4W119833                             |
| 15  | Exemplary Patent Examination History of ZTE                                                                                                   |
| 16  | Examination history of ZTE's exemplary European patent family EP3567734B1<br><br>History and Chinese translation                              |
| 17. | ZTE's exemplary patent priority document CN201710014289.6                                                                                     |
| 18  | 3GPP TS 38.212 v15.8.0 and its Chinese translation                                                                                            |
| 19. | Oral transcript of the invalidation declaration case of ZTE's exemplary patent                                                                |
| 20  | Statements of Opinion by Patentee in ZTE Exemplary Patent Invalidation Cases                                                                  |
| 21  | 3GPP Draft R1-1700249 and its Chinese translation                                                                                             |

|     |                                                                                                                                                                       |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22  | 3GPP Draft R1-165454 and its Chinese translation                                                                                                                      |
| 23  | WO2015/123855A1                                                                                                                                                       |
| 24  | WO2015/139297A1                                                                                                                                                       |
| 25  | Academic paper "Channel Polarization: A Method for<br>Constructing Capacity-Achieving Codes for<br>Symmetric Binary-Input Memoryless Channels"<br>Chinese translation |
| 26. | Book: LTE Mobile Communication System                                                                                                                                 |
| 27  | Academic paper "Polar coded HARQ scheme with Chase"<br>"Combining" and its Chinese translation                                                                        |
| 28  | Academic paper "A Novel Puncturing Scheme for Polar"<br>Codes and its Chinese translation                                                                             |
| 29  | 3GPP Draft R1-1611254 and its Chinese translation                                                                                                                     |
| 30  | 3GPP Draft R1-1612278 and its Chinese translation                                                                                                                     |
| 31. | Academic paper "Channel Polarization and Polar Code Construction"                                                                                                     |
| 32  | Academic paper "Beyond Turbo Codes Rate-Compatible"<br>Punctured Polar Codes and its Chinese translation                                                              |
| 33. | Book: "5G Technology Core and Enhancements from R15 to R16"                                                                                                           |
| 34. | Book: *Polar Codes: Principles and Applications*                                                                                                                      |
| 35. | Dr. Deng Fei's Economics Expert Report                                                                                                                                |
| 36  | Hojin Chang's First Witness Testimony                                                                                                                                 |
| 37. | Statement by Professor John R. Thomas                                                                                                                                 |

|    |                                                                                                                                                                                                                     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | 38 Emails concerning amendments to the 2021 patent licensing agreement terms                                                                                                                                        |
|    | 39. Expert Opinion of Professor Ning Lizhi                                                                                                                                                                          |
| 40 | Intellectual Property Finance<br>Huawei Technologies Co., Ltd. on the U.S. Federal Trade Commission's "21st Century Business Herald"<br><br>Public Comments on the Hearing on "Competition and Consumer Protection" |
|    | 41. Huawei Rotating Chairman Xu Zhijun: Let 5G push MBB to new heights.                                                                                                                                             |
|    | 42. "Latest Development Trends of Essential Patents for 5G+ Industry Standards (2021)"                                                                                                                              |
| 43 | ZTE's 2019 Financial Report: Revenue Exceeds 90 Billion Yuan, Carrier Business Grows<br><br>16.7% increase                                                                                                          |
| 44 | ZTE's average revenue over the past five years was 110.783 billion yuan, and its average net profit was...<br><br>Profit was 6.725 billion yuan.                                                                    |
| 45 | In-depth Financial Analysis of ZTE Corporation: Revenue, Profit, and R&D in Harmony<br><br>Head to Head                                                                                                             |
| 46 | ZTE's profits surged by 173%! Gross profit margin hit a 5-year high! ZTE's 2019<br><br>The company delivered a "beautiful" annual report.                                                                           |
| 47 | ZTE expects Q1 net profit of 1.8 billion yuan, with all three major business segments growing simultaneously.<br><br>Up to 2.4 billion yuan                                                                         |
|    | 48. ZTE issues statement refuting Ericsson's patent lawsuit.                                                                                                                                                        |
| 49 | Memorandum of Understanding from Delaware Courts in Cases such as Interactive Digital v. ZTE<br><br>See Record                                                                                                      |
| 50 | ZTE Corporation is accused of seeking excessive patent benefits through patent divestiture and cooperation with NPE.<br><br>Interest Rate                                                                           |
|    | 51. Nokia's Ten Years: Decline in Mobile Phone Business and Criticism of Patent Hoarding                                                                                                                            |

|     |                                                                                                                      |
|-----|----------------------------------------------------------------------------------------------------------------------|
|     | suspect"                                                                                                             |
| 52. | Global NPE Intellectual Property Risks and my country's Countermeasures                                              |
| 53. | New Trends in Overseas NPE Litigation and Joint Response Strategies                                                  |
| 54  | TCL v. Ericsson Judgment and Partial Translation                                                                     |
|     | Excerpt from the first-instance judgment in the case of Wireless Planet v. Huawei                                    |
| 56. | Ericsson sues Samsung for patent infringement in Europe.                                                             |
| 57. | Huawei's cumulative patent licensing revenue has exceeded \$4 billion over the past decade.                          |
| 58. | Huawei Announces Multiple Patent Licensing Plans and Fee Rates                                                       |
| 59  | Huawei Holds 6th Innovation and Intellectual Property Conference Driven by Openness<br>forum"                        |
| 60  | The patent licensing agreement between Samsung Electronics and Ericsson and its Chinese translation<br>arts          |
| 61  | The patent licensing agreement signed between Samsung Electronics and Nokia and its Chinese translation<br>arts      |
| 62  | The patent licensing agreement between Samsung Electronics and Interdigital and its<br>Chinese translation           |
| 63. | Dr. Deng Fei's Economics Expert Report (Part Two)                                                                    |
| 64  | The patent licensing agreement between Samsung Electronics and [other entities] and its Chinese translation.<br>arts |
| 65. | The patent licensing agreement between Samsung Electronics and Datang Telecom and its Chinese translation.           |
| 66  | The patent licensing agreement signed between Samsung Electronics and Docomo and its Chinese translation<br>arts     |

|    |                                                                                                                                                                                |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | 67. The patent licensing agreement between Samsung Electronics and NEC and its Chinese translation.                                                                            |
| 68 | The patent licensing and transfer agreement signed between Samsung Electronics and Huawei and its contents<br>Translation                                                      |
| 69 | Based on the Huawei-Samsung agreement, it can be inferred that the ZTE-Samsung agreement in question is applicable to this case.<br><br>Explanation of license fee calculation |

Appendix 1:

The 2021 Agreement covers the period from 2021 to 2023, with previous waivers...

The period is from the fourth quarter of 2018 to 2020. Regarding the aforementioned licenses and past...

The licensing fees during the waiver period are published by Canalys and Dell'Oro.

The actual sales figures set a cap of \$400 per unit for the net selling price of the mobile phones, and

For the portion of the license period, discount the sales revenue for each year at a discount rate of 10%.

The present value up to 2021, and also referring to the portion during the previous exemption period, with reference to the United States.

The Federal Reserve System's one-year U.S. Treasury bills for each year from 2018 to 2020.

The average annual rate of return, converted to 2021, yields the following two tables:

| Product generation lifespan |           | Samsung Electronics             |                                 | ZTE Corporation |  |
|-----------------------------|-----------|---------------------------------|---------------------------------|-----------------|--|
|                             |           | Terminal equipment base station | Terminal equipment base station |                 |  |
| 5G                          | 2021-2023 |                                 |                                 |                 |  |
| 4G                          | 2021-2023 |                                 |                                 |                 |  |
| 3G                          | 2021-2023 |                                 |                                 |                 |  |

| Product generation lifespan |             | Samsung Electronics    |                                 | ZTE terminal |  |
|-----------------------------|-------------|------------------------|---------------------------------|--------------|--|
|                             |             | equipment base station | terminal equipment base station |              |  |
| 5G                          | 2018Q4-2020 |                        |                                 |              |  |

|    |             |  |
|----|-------------|--|
| 4G | 2018Q4-2020 |  |
| 3G | 2018Q4-2020 |  |

Appendix 2:

## Intellectual Property Finance

Scenario 1: Actual sales revenue already incurred from 2023 to 2024 will be used for 2025.

Sales forecasts up to 2030 are estimated using projections from Canalys and Dell'Oro.

The future sales revenue is discounted to its present value in 2023 at a discount rate of 10%.

| Highest generation | the term  | Samsung Electronics |              | Nokia        |
|--------------------|-----------|---------------------|--------------|--------------|
|                    |           | terminal equipment  | base station | base station |
| 5G                 | 2023-2030 |                     |              |              |
| 4G                 | 2023-2030 |                     |              |              |
| 3G                 | 2023-2030 |                     |              |              |

Scenario 2: Canalys, IDC, and Dell'Oro will be used from 2023 to 2030.

The projected sales revenue was estimated, and the future sales revenue was discounted to present value at a discount rate of 10%.

Present value in 2023.

| Highest generation | the term  | Samsung Electronics |              | Nokia        |
|--------------------|-----------|---------------------|--------------|--------------|
|                    |           | terminal equipment  | base station | base station |
| 5G                 | 2023-2030 |                     |              |              |
| 4G                 | 2023-2030 |                     |              |              |
| 3G                 | 2023-2030 |                     |              |              |