

the trial, to explain to you the rules of law that you must follow and apply in arriving at your verdict.

First, I will give you some general instructions that apply in every case; for example, instructions about the burden of proof and how to judge the believability of witnesses. Then, I will give you some specific rules of law about this particular case. Finally, I will explain to you the procedures you should follow in your deliberations.

GENERAL INSTRUCTIONS

It is my duty and my responsibility to instruct you on the law you are to apply in this case. The law contained in these instructions is the only law you may follow. It is your duty to follow what I instruct you the law is, regardless of any opinion that you might have as to what the law ought to be.

If I have given you the impression during the trial that I favor either party, you must disregard that impression. If I have given you the impression during the trial that I have an opinion about the facts of this case, you must disregard that impression. You are the sole judges of the facts of this case. Other than my instructions to you on the law, and the definitions I have given to you of terms in the patents in dispute, you should disregard anything I may have said or done during the trial in arriving at your verdict.

You should consider all of the instructions about the law as a whole and regard each instruction in light of the others, without isolating a particular statement or paragraph.

The testimony of the witnesses, exhibits introduced by the parties, and stipulations of the parties constitute the evidence. The statements of counsel are not evidence; they are only arguments. It is important for you to distinguish between the arguments of counsel and the evidence on which those arguments rest. What the lawyers say or do is not evidence. You may, however, consider their arguments in light of the evidence that has been admitted and determine whether the evidence admitted in this trial supports the arguments. You must determine the facts from all the testimony that you have heard and the other evidence submitted. You are the judges of the facts, but in finding those facts, you must apply the law as I instruct you.

Generally speaking, there are two types of evidence. One is direct evidence, such as testimony of an eyewitness. The other is indirect or circumstantial evidence. Circumstantial evidence is evidence that proves a fact from which you can logically conclude another fact exists. By way of example, if you wake up in the morning and see that the sidewalk is wet, you may find from that fact that it rained during the night. However, other evidence, such as a turned-on garden hose, may provide an explanation for the water on the sidewalk. Therefore, before

you decide that a fact has been proven by circumstantial evidence, you must consider all the evidence in the light of reason, experience, and common sense.

As a general rule, the law makes no distinction between direct and circumstantial evidence, but simply requires that you find the facts from all of the evidence.

In determining whether any fact has been proven by the applicable burden of proof, you may, unless otherwise instructed, consider the testimony of all the witnesses, regardless of who may have called them, and all exhibits received into evidence, regardless of who may have produced them, the stipulations, and any fair inferences and reasonable conclusions you can draw from the facts that have been proven. In other words, you may make deductions and reach conclusions that common sense leads you to draw from the facts which have been established by the evidence.

As I told you previously, a “stipulation” is an agreement between both sides that certain facts are true. When the lawyers on both sides stipulate or agree to the existence of a fact, you must, unless otherwise instructed, accept the stipulation as evidence and regard that fact as proved. These stipulations are listed behind the tab labeled “Statement of Stipulated Facts” in your juror notebook. You must therefore treat these facts as having been proven.

The attorneys have used slides and other visual aids, sometimes referred to as “demonstrative exhibits,” while presenting or examining a witness.

Demonstrative exhibits are not evidence, have not been admitted in evidence, and will not go back to the jury room. They are a party’s picture, chart, or drawing to describe something involved in this trial. If your recollection of or conclusion about the evidence differs from the demonstrative exhibit, rely on your recollection.

You are required by law to decide the case in a fair, impartial, and unbiased manner, based entirely on the law and on the evidence presented to you in the courtroom. You may not be influenced by passion, prejudice, or sympathy you might have for any party in arriving at your verdict.

You alone are to determine the questions of credibility or truthfulness of a witness. In weighing the testimony of a witness, you may consider the witness’s manner and demeanor on the witness stand, any feelings or interest that he or she may have in the case, any prejudice or bias about the case that he or she may have, and the consistency or inconsistency of his or her testimony considered in the light of the circumstances. You may ask yourself a few questions. Has the witness been contradicted by other credible evidence? Has he or she made statements at other times and places contrary to those made here on the witness stand? You must give the testimony of each witness the credibility you think it deserves.

Even though a witness may be associated with a party to the action and therefore interested in its outcome, the testimony may be accepted if it is not contradicted by direct evidence or by any inference that may be drawn from the evidence, if you believe the testimony.

You are not to decide this case by counting the number of witnesses who have testified on the opposing sides. Witness testimony is weighed; witnesses are not counted. The test is not the relative number of witnesses, but the relative convincing force of the evidence. The testimony of a single witness is sufficient to prove any fact, even if a greater number of witnesses testified to the contrary, if after considering all of the other evidence, you believe that witness.

Certain testimony has been presented to you through depositions. As I have previously told you, a deposition is a witness's sworn testimony that is taken before the trial. During a deposition, the witness is under oath and swears to tell the truth, and the lawyers for each party may ask questions. A court reporter is present and records the questions and answers. Deposition testimony is entitled to the same consideration as live testimony, and you must judge it in the same way as if the witness was testifying in court.

During the trial, if I sustained objections to certain questions and exhibits, you must disregard those questions and exhibits entirely. Do not speculate as to what the witness would have said if permitted to answer the question or as to the

contents of an exhibit not admitted. Also, certain testimony or other evidence may have been ordered stricken from the record, and if so, you have been instructed to disregard this evidence. Do not consider any testimony or other evidence which has been stricken or which I instructed you to disregard in reaching your decision. Your verdict must be based solely on the legally admissible evidence and testimony.

Any notes that you have taken during this trial are only aids to memory. If your memory should differ from your notes, then you should rely on your memory and not on the notes. The notes are not evidence. A juror who has not taken notes should rely on his or her independent recollection of the evidence and should not be unduly influenced by the notes of other jurors. Notes are not entitled to any greater weight than the recollection or impression of each juror about the testimony.

After I finish reading the Court's Charge, the lawyers will make closing arguments. Remember, closing arguments are not evidence, but rather are the attorneys' interpretations of what the evidence has shown or not shown.

1. CONTENTIONS OF THE PARTIES

As I did at the start of the case, I will first give you a summary of each side's contentions in this case. I will then provide you with detailed instructions on what each side must prove to win on each of its contentions.

Plaintiff CommScope Technologies LLC filed this lawsuit against Dali, seeking money damages from Dali for allegedly infringing the '747, '982, '218, '286, and '402 patents by making, importing, using, selling and/or offering for sale the t-Series and Matrix products, which I will call "Dali's Accused Products," that CommScope Technologies LLC argues are covered by one or more claims of these patents. CommScope Technologies LLC contends that Dali's infringement has been willful.

I have determined that Dali infringes claims 7, 8, and 10 of the '747 patent. Dali, however, argues that claims 7, 8, and 10 of the '747 patent are invalid. Invalidity is a defense to infringement. Dali denies that it has infringed the asserted claims of the '982, '218, '286, and '402 patents and argues that, in addition, the asserted claims are invalid. You are not to draw any inferences about CommScope's allegations related to the '982, '218, '286, and '402 patents, which are not part of the same patent family as the '747 patent, from my decision on the '747 patent.

Dali has also brought counterclaims against CommScope for patent infringement. Dali seeks money damages from CommScope for allegedly infringing the '473 and '521 patents by making, importing, using, selling and/or offering for sale certain products that Dali argues are covered by one or more claims of these patents.

CommScope denies that it has infringed the claims asserted by Dali and argues that, in addition, the asserted claims are invalid. As I mentioned before, invalidity is a defense to infringement.

The parties have stipulated that CommScope's FlexWave Prism and ION-E use the CommScope patents that CommScope is accusing Dali of infringing. Specifically, the parties have stipulated that CommScope's FlexWave Prism and ION-E products each practice and/or are commercial embodiments of each asserted claim of the '982, '218, '286, and '402 patents. The parties have also stipulated that CommScope's FlexWave Prism practices and/or is a commercial embodiment of each asserted claim of CommScope's '747 patent.

The parties have stipulated that Dali does not sell any products that practice or embody Dali's '473 and '521 patents.

For each party's patent infringement claims against the other, the first issue you will be asked to decide is whether the alleged infringer has infringed the claims of the patent holder's patents. CommScope is the holder of the '982, '218, '286, '402, and '747 patents. Dali is the holder of the '473 and '521 patents. If you decide that any claim of either party's patents has been infringed, you will then need to decide any money damages to be awarded to the patent holder to compensate it for the infringement. You will also need to make a finding as to whether any infringement was willful. If you decide that any infringement was

willful, that decision should not affect any damage award you give. If appropriate, I will consider your willfulness determination after your verdict. You will also be asked to decide whether those patents are invalid.

2. THE ROLE OF THE CLAIMS OF A PATENT

Before you can decide many of the issues in this case, you will need to understand the role of patent “claims.” The patent claims are the numbered sentences at the end of each patent. The claims are important because it is the words of the claims that define what a patent covers. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent’s coverage. Each claim is effectively treated as if it were a separate patent, and each claim may cover more or less than another claim. Therefore, what a patent covers depends, in turn, on what each of its claims covers.

You will first need to understand what each claim covers in order to decide whether or not there is infringement of the claim and to decide whether or not the claim is invalid. The law says that it is my role to define the terms of the claims and it is your role to apply my definitions to the issues that you are asked to decide in this case. As you know, I have determined the meaning of certain terms of the claims of some of the patents at issue. You have been given a document reflecting those meanings. For a claim term for which I have not provided you with a

definition, you should apply the ordinary meaning as a person of ordinary skill in the art would have understood it. You must accept as correct the definitions I have given to these words in the claims. It is your job to take these definitions and apply them to the issues that you are deciding, including the issues of infringement and validity.

3. HOW A CLAIM DEFINES WHAT IT COVERS

I will now explain how a claim defines what it covers.

A claim sets forth, in words, a set of requirements. Each claim sets forth its requirements in a single sentence. If a device or a method satisfies each of these requirements, then it is covered by the claim.

There can be several claims in a patent. Each claim may be narrower or broader than another claim by setting forth more or fewer requirements. The coverage of a patent is assessed claim-by-claim. In patent law, the requirements of a claim are often referred to as “claim elements” or “claim limitations.” For example, a claim that covers the invention of a table may recite a tabletop, four legs, and the glue that secures the legs to the tabletop. In this example, the tabletop, legs, and glue are each separate elements or limitations of the claim. When a thing (such as a product or a process) meets all of the requirements of a claim, the claim is said to “cover” that thing, and that thing is said to “fall” within the scope of that

claim. In other words, a claim covers a product or process where each of the claim elements or limitations is present in that product or process.

If an allegedly infringing device or system fails to include even one element or limitation of a claim, it does not meet all of the requirements of a claim and is not covered by the claim. If an accused device or system is not covered by the claim, it does not infringe that claim.

By understanding the meaning of the words in a claim and by understanding that the words in a claim set forth the requirements that a product or process must meet in order to be covered by that claim, you will be able to understand the scope of coverage for each claim. Once you understand what each claim covers, then you are prepared for the issues that you will be asked to decide, such as infringement and invalidity.

4. INDEPENDENT AND DEPENDENT CLAIMS

This case involves two types of patent claims: independent claims and dependent claims.

An “independent claim” sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers.

The remainder of the claims are “dependent claims.” A dependent claim does not itself recite all of the requirements of the claim but refers to at least one

other claim for some of its requirements. In this way, the claim “depends” on another claim. A dependent claim incorporates all of the requirements of the claim(s) to which it refers. The dependent claim then adds its own additional requirements. To determine what a dependent claim covers, it is necessary to look at both the dependent claim and any other claim(s) to which it refers. A product or process that meets all of the requirements of both the dependent claim and the claim(s) to which it refers is covered by that dependent claim.

5. INFRINGEMENT GENERALLY

I will now instruct you how to decide whether or not an alleged infringer has infringed a patent. Infringement is assessed on a claim-by-claim basis. Therefore, there may be infringement as to one claim but no infringement as to another.

In this case, there are two possible ways that a claim may be infringed. They are called: (1) direct infringement; and (2) indirect infringement. Indirect infringement can occur in one of two ways: (a) by encouraging someone else—like a customer—to infringe a claim, or (b) by selling an accused product or system for use in another product or process that has no substantial non-infringing uses.

There cannot be indirect infringement without someone else engaging in direct infringement. To prove indirect infringement, a patent holder must also prove that an alleged infringer’s indirect infringement caused direct infringement.

In this case, CommScope has alleged that Dali infringes claims 1 and 12 of the '218 patent, claims 23 and 27 of the '286 patent, and claims 1 and 14 of the '402 patent directly and indirectly by making, using, selling, or offering to sell its t-Series and Matrix products in the United States. CommScope alleges these claims are infringed literally and under the doctrine of equivalents.

CommScope has also alleged that Dali literally infringes claim 1 of the '982 patent, directly and indirectly by making, using, selling, or offering to sell its t-Series and Matrix products in the United States.

I have determined that Dali infringes claims 7, 8, and 10 of the '747 patent directly.

Dali has alleged that CommScope literally infringes claim 1 of the '521 patent directly and indirectly by making, using, selling, or offering to sell its FlexWave Prism product in the United States.

Dali has also alleged that CommScope literally infringes claims 6, 9, 11, 14, 15, and 21 of the '473 patent directly by making, using, selling, or offering to sell its ION-E product in the United States.

In order to prove infringement, a patent holder must prove that the requirements for one or more of these types of infringement are met by a preponderance of the evidence.

The existence of an alleged infringer's own patent does not constitute a defense to infringement of someone else's patent, but may be considered by you as to allegations of willfulness.

I will now explain each of these types of infringement in more detail.

6. INFRINGEMENT – BURDEN OF PROOF

CommScope and Dali are required to prove infringement by a "preponderance of the evidence," meaning that it is more likely than not that the accused products infringe the asserted claims.

7. DIRECT INFRINGEMENT BY "LITERAL INFRINGEMENT"

There are two types of "direct infringement": (1) "literal infringement" and (2) "infringement under the doctrine of equivalents." In order to prove direct infringement by literal infringement, a patent holder must prove by a preponderance of the evidence that an alleged infringer made, used, sold, offered for sale within, or imported into the United States a product or process that meets all of the requirements of a claim and did so without the permission of the patent holder during the time the patent was in force. You must compare the product or process with each and every one of the requirements of a claim to determine whether all of the requirements of that claim are met. To assess infringement, you are to compare the accused products and methods to the claims. You are not to

compare the accused products to the embodiments and figures described in the specification.

You must determine, separately for each asserted claim, whether or not there is infringement. There is one exception to this rule. If you find that a claim on which other claims depend is not infringed, there cannot be infringement of any dependent claim that refers directly or indirectly to that independent claim. On the other hand, if you find that an independent claim has been infringed, you must still decide, separately, whether the product or process meets additional requirements of any claims that depend from the independent claim, thus, whether those claims have also been infringed. A dependent claim includes all the requirements of any of the claims to which it refers plus additional requirements of its own.

A party can directly infringe a patent without knowing of the patent or without knowing that what the party is doing is patent infringement.

8. INFRINGEMENT OF “COMPRISING” CLAIMS

The preamble to the claims of the patents in this case use the word “comprising.” The word “comprising” means “including the following but not excluding others.”

If you find that the accused product or method includes all of the elements in the claim, even if the accused product or method includes additional components

or method steps, you must find that the accused product or method literally infringes the claim.

9. DIRECT INFRINGEMENT UNDER THE DOCTRINE OF EQUIVALENTS

If a company makes, uses, sells, offers to sell within, or imports into the United States a product or process that does not meet all of the requirements of a claim and thus does not literally infringe that claim, there can still be direct infringement if that product or process satisfies that claim “under the doctrine of equivalents.”

Under the doctrine of equivalents, a product or process infringes a claim if the accused product or process contains elements or performs steps corresponding to each and every requirement of the claim that is equivalent to, even though not literally met by, the accused product or process. You may find that an element or step is equivalent to a requirement of a claim that is not met literally if a person having ordinary skill in the field of technology of the patent would have considered the differences between them to be “insubstantial” or would have found that the structure or action: (1) performs substantially the same function and (2) works in substantially the same way (3) to achieve substantially the same result as the requirement of the claim. In order for the structure or action to be considered interchangeable, the structure or action must have been known at the time of the

alleged infringement to a person having ordinary skill in the field of technology of the patent. Interchangeability at the present time is not sufficient. To prove infringement by “equivalents,” the patent holder must prove the equivalency of the structure or actions to a claim element by a preponderance of the evidence.

10. INDIRECT INFRINGEMENT

One way to find that an alleged infringer indirectly infringed is to find that it actively encouraged infringement by others. CommScope alleges that Dali indirectly infringes claims 1 and 12 of the '218 patent, claims 23 and 27 of the '286 patent, claims 1 and 14 of the '402 patent, and claim 1 of the '982 patent. Dali alleges that CommScope indirectly infringes claim 1 of the '521 patent. The patent owner must prove by a preponderance of the evidence that (1) a single actor is responsible for direct infringement, namely the presence of a product or process that meets all of the requirements of the asserted claim , and (2) the alleged infringer actively encouraged these acts of infringement by the single actor responsible for direct infringement.

To prove indirect infringement in this way, the patent owner must establish that by a preponderance of the evidence that:

1. The alleged infringer aided, instructed, or otherwise acted with the intent to cause acts by the alleged direct infringer that would constitute direct infringement of the patent;

2. The alleged infringer knew of the patent, or showed willful blindness to the existence of the patent, at that time;
3. The alleged infringer knew, or showed willful blindness, that the actions of the alleged direct infringer would infringe at least one claim of the patent; and
4. The alleged direct infringer infringed at least one patent claim.

For you to find willful blindness, the patent holder must have proven by a preponderance of the evidence that (1) the alleged infringer must have subjectively believed that there was a high probability that a patent existed covering the accused product or method, and (2) the alleged infringer must have taken deliberate actions to avoid learning of the patent.

Another way an allegation of indirect infringement can arise is when a patent holder argues that an alleged infringer contributed to direct infringement of the patent by a third person or company. Dali also alleges that CommScope infringes claim 1 of the '521 patent in this manner by selling high density remote units with DPD to its customers who purchase FlexWave Prism DAS systems. CommScope alleges that Dali infringes each of the asserted claims of the '982, '218, '286, and '402 patents by selling its accused systems to its customers. As with direct infringement, you must determine indirect infringement on a claim-by-claim basis.

An alleged indirect infringer is liable for indirect infringement of a claim if the patent holder proves each of the following by a preponderance of the evidence:

(1) the alleged indirect infringer sells, offers to sell, or imports within the United States a component of a product, or apparatus for use in a process, during the time the patent is in force;


(2) the component or apparatus has no substantial, noninfringing use;

(3) the component or apparatus constitutes a material part of the invention;

(4) the alleged indirect infringer is aware of the patent and knows that the products or processes for which the component or apparatus has no other substantial use may be covered by a claim of the patent or may satisfy a claim of the patent under the doctrine of equivalents; and

(5) that use directly infringes the claim.

11. WILLFUL INFRINGEMENT

If you find by a preponderance of the evidence that a party infringed a ~~valid~~  claim of the other party's patent, either literally or under the doctrine of equivalents, then you must also determine whether or not the infringement was willful.

To show that infringement was willful, the patent owner must prove by a preponderance of the evidence that the infringer knew of the patent owner's patent and intentionally infringed at least one asserted claim of the patent. For example,

you may consider whether the infringer's behavior was malicious, wanton, deliberate, consciously wrongful, flagrant, or in bad faith. The infringer's knowledge of the patent may be shown by evidence of willful blindness where the alleged infringer consciously ignored the existence of both the patent and direct infringement of that patent. To find willful blindness you must find by a preponderance of the evidence that (1) the infringer must have subjectively believed that there was a high probability that a patent existed covering the accused product or method and (2) the infringer must have taken deliberate actions to avoid learning of the patent.

In determining whether the patent owner has proven that the infringement was willful, you must consider all circumstances and assess the infringer's knowledge at the time the challenged conduct occurred. Relevant circumstances may include, but are not limited, to:

- (1) Whether or not the alleged infringer acted consistently with the standards of behavior for its industry;
- (2) Whether or not the alleged infringer tried to cover up its infringement;
- (3) Whether or not the alleged infringer reasonably believed it did not infringe or that the patent was invalid;

(4) Whether or not the alleged infringer made a good faith effort to avoid infringing the patent, for example, whether the alleged infringer attempted to design around the patent; and

(5) Whether or not the alleged infringer intentionally copied a product of the patent holder that is covered by a patent.

If you determine that any infringement was willful, you may not allow that decision to affect the amount of any damages award you give for infringement.

13. INVALIDITY—BURDEN OF PROOF

I will now instruct you on the rules you must follow in deciding whether or not an alleged infringer has proven that claims of a patent are invalid. Patents are presumed to be valid. To prove that any claim of a patent is invalid, an alleged infringer must persuade you by clear and convincing evidence in order to overcome that presumption, i.e., you must be left with a clear conviction that the claim is invalid. Invalidity is determined on a claim-by-claim basis. If one claim of a patent is invalid, this does not mean that any other claim is necessarily invalid.

14. WRITTEN DESCRIPTION REQUIREMENT

The patent law contains certain requirements for the part of the patent called the specification. Sometimes, like in this case, an alleged infringer contends that claim(s) of a patent holder's patent are invalid because the specification of the

patent does not contain an adequate written description of the invention. To succeed, the alleged infringer must show by clear and convincing evidence that the specification fails to meet the law's requirements for written description of the invention. In the patent application process, the applicant may keep the originally filed claims, or change the claims between the time the patent application is first filed and the time a patent is issued. An applicant may amend the claims or add new claims. These changes may narrow or broaden the scope of the claims. The written description requirement ensures that the issued claims correspond to the scope of the written description that was provided in the original application.

In deciding whether the patent satisfies this written description requirement, you must consider the description in the patent from the viewpoint of a person having ordinary skill in the field of technology of the patent when the application was filed. The written description requirement is satisfied if that person reading the original patent application would have recognized that it describes the full scope of the claimed invention as it is finally claimed in the issued patent and that the inventor actually possessed that full scope at the time of filing of the original application.

The written description requirement may be satisfied by any combination of the words, structures, figures, diagrams, formulas, etc., contained in the patent application. The full scope of a claim or any particular requirement in a claim

need not be expressly disclosed in the original patent application if a person having ordinary skill in the field of technology of the patent at the time of filing would have understood that full scope from the written description in the patent application.

15. ENABLEMENT

The patent law contains further requirements for the part of the patent called the specification. Sometimes, like in this case, an alleged infringer contends that claim(s) of a patent holder's patent are invalid because the specification does not contain a sufficiently full and clear description of how to make and use the full scope of the claimed invention. To succeed on such a contention, the alleged infringer must show by clear and convincing evidence that the patent does not contain a sufficiently full and clear description of the claimed invention. To be sufficiently full and clear, the description in the patent, considering the words and figures, must contain enough information to have allowed a person having ordinary skill in the field of technology of the patent to make and use the full scope of the claimed invention at the time the original patent application was filed. This is known as the "enablement" requirement. It is the claims, not the features of an accused device, that must be enabled by the specification. If a patent claim is not enabled by the specification, it is invalid.

In order to be enabled, the patent in issue must permit persons having ordinary skill in the field of technology of the patent to make and use the full scope of the claimed invention at the time of original filing without having to conduct undue experimentation. However, some amount of experimentation to make and use the invention is allowable. In deciding whether a person having ordinary skill in the relevant field would have to experiment unduly in order to make and use the invention, you may consider several factors:

- (1) the time and cost of any necessary experimentation;
- (2) how routine any necessary experimentation is in the relevant field;
- (3) whether the patent discloses specific working examples of the claimed invention;
- (4) the amount of guidance presented in the patent;
- (5) the nature and predictability of the relevant field;
- (6) the level of ordinary skill in the relevant field; and
- (7) the scope of the claimed invention.

No one or more of these factors is alone dispositive. Rather, you must make your decision whether or not the degree of experimentation required is undue based upon all of the evidence presented to you. You should weigh these factors and determine whether or not, in the context of this invention and the state of the art at the time of the original application, a person having ordinary skill in the

relevant field would need to experiment unduly to make and use the full scope of the claimed invention.

16. PRIOR ART

Prior art may include items that were publicly known or that have been used or offered for sale, or references, such as publications or patents, that disclose the claimed invention or elements of the claimed invention. To be prior art, the item or reference must have been made, known, used, published, or patented either before the invention was made or more than one year before the filing date of the patent application. However, prior art does not include a publication that describes the inventor's own work and was published less than one year before the date of invention.

17. ANTICIPATION

In order for someone to be entitled to a patent, the invention must actually be "new" and the inventor must not have lost the inventor's rights by delaying the filing of an application claiming the invention. In general, inventions are new when the identical product or process has not been made, used, or disclosed before. Anticipation must be determined on a claim-by-claim basis. Anticipation is proven by showing that a single prior art reference discloses every limitation of the challenged claim.

In this case, CommScope contends that claims 6, 9, 11, and 14 of Dali's '473 patent and claim 1 of Dali's '521 patent are invalid because the claimed invention(s) are anticipated. The alleged infringer must have convinced you of this by clear and convincing evidence in order to overcome the presumption of validity.

Here is a list of ways that an alleged infringer can show that a patent claim was not new:

(1) An invention is not new if it was known to or used by others in the United States before the date of the invention. An invention is known when the information about it was publicly accessible on that date.

(2) An invention is not new if it was already patented or described in a printed publication, anywhere in the world, before the date of the invention. A description is a "printed publication" only if it publicly accessible.

(3) The patent holder has lost the inventor's rights if the claimed invention was already patented or described in a printed publication, anywhere in the world, by the patent holder or anyone else, more than a year before the date the patent was filed. An invention was patented by another if the other patent describes to a person having ordinary skill in the technology the same invention claimed by the patent holder.

(4) An invention is not new if it was described in a published patent application filed in the United States or designated to the United States under the

International Patent System, and was published in English before the date of the invention.

(5) An invention is not new if the claimed invention was described in a patent granted on an application by another filed in the United States or designated to the United States under the International Patent System, and was published in English before the effective filing date of the subject patent-in-suit.

(6) An invention is not new if the invention was made by someone else in the United States before the invention was made by the patent holder and the other person did not abandon, suppress, or conceal the invention.

In determining whether a single item of prior art anticipates a patent claim, you should take into consideration not only what is expressly disclosed in the particular prior art reference but also what is inherently present or disclosed in that prior art or inherently results from its practice. Prior art inherently anticipates a patent claim if the missing element or feature would necessarily result from what the single item of prior art teaches to persons of ordinary skill in the art. A party claiming inherent anticipation must prove that it is highly probable that the allegedly inherent element or feature necessarily is present. Evidence outside of the prior art reference itself may be used to show that elements that are not expressly disclosed in the reference are inherent in it. To be inherent, the feature that is alleged to have been inherent must necessarily have existed in the prior art

reference. The fact that the feature is likely to have existed is not sufficient. It is not required, however, that persons of ordinary skill recognize or appreciate the inherent disclosure at the time the prior art was first known or used. Thus, the prior use of the patented invention that was unrecognized and unappreciated can still be an invalidating anticipation, provided the allegedly inherent feature was necessarily present in the reference.

For a patent or printed publication to anticipate a patent claim, the disclosure of the claimed invention must be complete enough to enable one of ordinary skill in the art to use the invention without undue experimentation. Patents and printed publications are presumed to be enabled. In determining whether the disclosure is enabling, you should consider what would have been within the knowledge of a person of ordinary skill in the art as of the date of the invention, and you may consider evidence that sheds light on the knowledge such a person would have had.

18. OBVIOUSNESS

In this case, both parties assert that certain claims of the other parties' patents are invalid because the claimed invention is obvious in light of prior art. The prior art that you consider for anticipation purposes is also prior art for obviousness purposes.

Even though an invention may not have been identically disclosed or described before it was made by an inventor, in order to be patentable, the

invention must also not have been obvious to a person of ordinary skill in the field of technology of the patent at the time the invention was made.

An alleged infringer may establish that a patent claim is invalid by showing, by clear and convincing evidence, that the claimed invention would have been obvious to persons having ordinary skill in the art at the time the invention was made in the relevant field.

In deciding obviousness, you must avoid using hindsight; that is, you should not consider what is known today or what was learned from the teachings of the patent. You should not use the patent as a road map for selecting and combining items of prior art. You must put yourself in the place of a person of ordinary skill in the art as of the date of the invention.

In determining whether a claimed invention is obvious, you must consider the level of ordinary skill in the field of the invention that someone would have had at the time the invention was made, the scope and content of the prior art, and any differences between the prior art and the claimed invention.

Keep in mind that the existence of each and every element of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks of prior art. In considering whether a claimed invention is obvious, you may, but are not required, to find obviousness if you find that at the time of the claimed invention there was a reason that would have

prompted a person having ordinary skill in the field of the invention to combine the known elements in a way the claimed invention does, taking into account such factors as (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions; and (6) whether the change resulted more from design incentives or other market forces.

To find it rendered the invention obvious, you must find that the prior art provided a reasonable expectation of success. In determining whether the claimed invention was obvious, consider each claim separately.

Before deciding the issue of obviousness, you must also consider certain factors, which, if established, may indicate that the invention would not have been obvious. No factor alone is dispositive, and you must consider the obviousness or nonobviousness of the invention as a whole. These factors include:

1. Were products covered by the claim commercially successful, and if so, was the commercial success of those products covered by the claim due to the merits of the claimed invention rather than due mostly to advertising, promotion, salesmanship, or features of the product other than those found in the claim?

2. Had there been a need for a solution to the problem facing the inventors, which went unsatisfied until it was satisfied by the claimed invention?

3. Did others try, but fail, to solve the problem solved by the claimed invention?

4. Did others invent the same invention at the same time?

5. Whether others copied the invention;

6. Whether the invention achieved unexpected results;

7. Whether others in the field praised the invention;

8. Whether persons having ordinary skill in the art of the invention expressed surprise or disbelief regarding the invention;

9. Whether others sought or obtained rights to the patent from the patent holder; and

10. Whether the inventor proceeded contrary to accepted wisdom in the field.

Answering all, or some of these questions “yes” may suggest that the claim was not obvious. These factors are relevant only if there is a connection, or nexus,

between the factor and the invention covered by the patent claim. Even if you conclude that some of the above factors have been established, those factors should be considered along with all the other evidence in the case in determining whether the alleged infringer has proven that the claimed invention would have been obvious.

19. PERSON OF ORDINARY SKILL IN THE ART

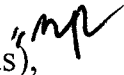
The question of invalidity of a patent claim is determined from the perspective of a person of ordinary skill in the art in the field of the claimed invention as of the time of the invention. Thus, prior art must be evaluated from the perspective of one of ordinary skill in the field of the invention as of the time of the invention.

In deciding what the level of ordinary skill in the field of the invention is, you should consider all the evidence introduced at trial, including but not limited to: (1) the levels of education and experience of the inventor and other persons actively working in the field; (2) the types of problems encountered in the field; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; and (5) the sophistication of the technology.

The person of ordinary skill is presumed to know all prior art that you have determined to be reasonably relevant. The person of ordinary skill is also a person of ordinary creativity that can use common sense to solve problems.

20. SCOPE AND CONTENT OF THE PRIOR ART

In considering whether the claimed invention was obvious at the time it was made, you should consider the scope and content of the prior art admitted at trial:

- For Dali's '473 patent:
 - U.S. Patent No. 7,286,507 ("Oh"),
 - U.S. Patent App. Pub. No. 2009/0180426 ("Sabat"),
 - U.S. Patent App. Pub. No. 2010/0128676 ("Wu"),
 - U.S. Patent No. 8,958,789 ("Bauman"), and
 - The CPRI Standard v. 4.0.
 - CommScope contends that "Sabat," "Wu," and "Oh" each anticipate claims 6 and 11 of the '473 patent, that "Sabat" anticipates claims 9 and 14, and a combination of "Sabat" and "Bauman" renders claims 15 and 21 of the '473 patent obvious.
- For Dali's '521 patent:
 - U.S. Patent No. 5,959,499 ("Khan"),
 - U.S. Patent No. 5,740,520 ("Cyze"),
 - U.S. Patent App. Pub. No. 2003/0058959 ("Rafie"),
 - U.S. Patent App. Pub. No. 2003/0035494 ("Bauder"),
 - U.S. Patent App. Pub. No. 2002/0186783 ("Opas"), 

- U.S. Patent No. 6,587,514 (“Wright”), and
- U.S. Patent No. 5,049,832 (“Cavers”).
 - CommScope contends that one or more of these prior art references anticipate claim 1 of the ’521 patent.
- For CommScope’s ’747 patent:
 - U.S. Patent No. 8,446,530 (“Bellers”),
 - “Synchronous Quantized Subcarrier Multiplexing for Transport of Video, Voice and Data” by Martin K. Grace, DALI-COMM001706-13 (“Grace”), and
 - PCT Publication WO 01/56197 A2 (“Farhan”).
 - Dali contends that a combination of “Bellers” and “Farhan,” and/or “Bellers” and “Grace,” render claims 7, 8, and 10 of the ’747 patent obvious.
- For CommScope’s ’982, ’218, ’286, and ’402 patents:
 - PCT Publication WO98/24253 (“Bexten”),
 - U.S. Patent No. 5,644,622 (“Russell”), and
 - U.S. Patent No. 5,748,683 (“Smith”).
 - Dali contends that a combination of “Bexten” and “Russell,” “Bexten” and “Smith,” and/or “Russell” and

“Smith” render the asserted claims of the '982, '218, '286, and '402 patents obvious.

21. DAMAGES--INTRODUCTION

If you find that an alleged infringer infringed any valid claim of a patent, you must then consider what amount of damages to award to the patent holder. I will now instruct you about the measure of damages. By instructing you on damages, I am not suggesting which party should win this case, on any issue. If you find that an alleged infringer has not infringed any valid claim of the patent, then the patent holder is not entitled to any damages.

The damages you award must be adequate to compensate the patent holder for the infringement. They are not meant to punish an infringer. Your damages award, if you reach this issue, should put the patent holder in approximately the same financial position that it would have been in had the infringement not occurred.

The patent holder has the burden to establish the amount of its damages by a preponderance of the evidence. While the patent holder is not required to prove the amount of its damages with mathematical precision, it must prove them with reasonable certainty. You may not award damages that are speculative, damages that are only possible, or damages that are based on guesswork.

In this case, both parties seek a reasonable royalty. A reasonable royalty is defined as the money amount a patent holder and an alleged infringer would have agreed upon as a fee for use of the invention at the time prior to when infringement began. A patent holder is entitled to recover no less than a reasonable royalty for each infringing act.

You shall not consider the effect of this litigation, the impact of a damages award, or any parties' ability to pay a damages award when deciding this case.

22. REASONABLE ROYALTY—DEFINITION

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty is the amount of royalty payment that a patent holder and the alleged infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began. In considering this hypothetical negotiation, you should focus on what the expectations of the patent holder and the alleged infringer would have been had they entered into an agreement at that time, and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was valid and infringed and that both parties were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. Evidence of things that happened after the

infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation. Although evidence of the actual profits an alleged infringer made may be used to determine the anticipated profits at the time of the hypothetical negotiation, the royalty may not be limited or increased based on the actual profits the alleged infringer made.

23. REASONABLE ROYALTY—RELEVANT FACTORS

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you may consider in making your determination are:

- (1) The value that the claimed invention contributes to the accused product.
- (2) The value that factors other than the claimed invention contribute to the accused product.
- (3) Comparable license agreements, such as those covering the use of the claimed invention or similar technology.

No one factor is dispositive and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty the alleged infringer would have been willing to pay and the patent

holder would have been willing to accept, acting as normally prudent business people.

The so called "*Georgia-Pacific*" factors, which can be considered to inform the hypothetical negotiations, are:

(1) The royalties received by the patentee for the licensing of the patent-in-suit, proving or tending to prove an established royalty^{mfl}

(2) The rates paid by the licensee for the use of other patents comparable to the patent-in-suit.

(3) The nature and scope of the license, as exclusive or nonexclusive, or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold.

(4) The licensor's established policy and marketing program to maintain his or her patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.

(5) The commercial relationship between the licensor and licensee, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter.

(6) The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a

generator of sales of his nonpatented items, and the extent of such derivative or convoyed sales.

(7) The duration of the patent and the term of the license.

(8) The established profitability of the product made under the patents, its commercial success, and its current popularity.

(9) The utility and advantages of the patented property over the old modes or devices, if any, that had been used for working out similar results.

(10) The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor, and the benefits to those who have used the invention.

(11) The extent to which the infringer has made use of the invention and any evidence probative of the value of that use.

(12) The portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention or analogous inventions.

(13) The portion of the realizable profits that should be credited to the invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

(14) The opinion and testimony of qualified experts.

(15) The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

24. REASONABLE ROYALTY—USE OF COMPARABLE LICENSE AGREEMENTS

When determining a reasonable royalty, you may consider evidence concerning the amounts that other parties have paid for rights to the patents in question, or for rights to similar technologies. If you choose to rely upon evidence of any other license agreements, you must account for any differences between those licenses and the hypothetically negotiated license between the patent owner and the alleged infringer, in terms of the technologies and economic circumstances of the contracting parties, when you make your reasonable royalty determination.

25. COMMENCEMENT OF DAMAGES

In determining the amount of damages, you must determine when the damages began. Damages commence on the date that the alleged infringer has both infringed and been notified of the alleged infringement of the patent.

The CommScope Patents

For infringement of CommScope's '982, '218, '286, '402, and '747 patents, the parties agree that any damages begin on February 19, 2016, the date CommScope filed this lawsuit.

The Dali Patents

For Dali's patents, the '473 patent and the '521 patent, any damages begin on the date the patent issued or the date the infringement began, whichever was later.

If you find indirect infringement by CommScope because it encouraged infringement of Dali's patents, then you must determine when CommScope learned of the Dali patent CommScope indirectly infringed.

If you find that the '473 patent issued before the infringing activity began, damages should be calculated as of the date you determine that the infringement began. If you find that the '473 patent was issued after the infringing activity began, damages should be calculated as of December 27, 2016, the date the '473 patent issued.

If you find that the '521 patent issued before the infringing activity began, damages should be calculated as of the date you determine that the infringement began. If you find that the '521 patent was issued after the infringing activity began, damages should be calculated as of May 12, 2015, the date the '521 patent issued.

You will now hear closing arguments. Each side will have 75 minutes.

POST-ARGUMENT INSTRUCTIONS

To reach a verdict, all of you must agree. Your verdict must be unanimous. Your deliberations will be secret. You will never have to explain your verdict to anyone.

It is your duty to consult with one another and to deliberate in an effort to reach agreement if you can do so. Each of you must decide the case for yourself, but only after an impartial consideration of the evidence with your fellow jurors. During your deliberations, do not hesitate to reexamine your own opinions and change your mind if convinced that you were wrong. But do not give up your honest beliefs as to the weight or effect of the evidence solely because of the opinion of your fellow jurors, or for the mere purpose of returning a verdict.

When you go to the jury room, the first thing that you should do is select one of your number as your foreperson, who will help to guide your deliberations and will speak for you here in the courtroom. Do not deliberate unless all of you are

present in the jury room. In other words, if one or more of you go to lunch together or are together outside the jury room, do not discuss the case.

A form of verdict has been prepared for your convenience. The foreperson will write the unanimous answer of the jury in the space provided for each question. At the conclusion of your deliberations, the foreperson should date and sign the verdict.

If you need to communicate with me during your deliberations, the foreperson should write the message and give it to the Court Security Officer. I will either reply in writing or bring you back into the court to answer your message.

I want to advise you that although our court reporter has taken down all of the testimony, it is not done in such a way that we can read back or furnish testimony to you at your request. Only when you have a specific disagreement as to a particular witness's testimony on a specific subject can we attempt to obtain that information for you.

Bear in mind that you are never to reveal to any person, not even to the court, how the jury stands, numerically or otherwise, on any question, until after you have reached a unanimous verdict, unless I instruct you otherwise.

You may now retire to the jury room to conduct your deliberations.

Dated: June 18, 2019



CHIEF JUDGE BARBARA M. G. LYNN