

United States International Trade Commission

Date: September 11, 2026

Case: Certain Video-Capable Electronic Devices, Including Smart
Televisions, Monitors, and Components Thereof



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1 UNITED STATES INTERNATIONAL TRADE COMMISSION

2 Washington, D.C.

3 BEFORE THE HONORABLE MONICA BHATTACHARYYA

4 Administrative Law Judge

5 - - - - - X

6 IN THE MATTER OF: : Investigation No.

7 CERTAIN VIDEO-CAPABLE ELECTRONIC : 337-TA-1495

8 DEVICES, INCLUDING SMART TELEVISIONS, :

9 MONITORS, AND COMPONENTS THEREOF :

10 - - - - - X

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13 MARKMAN HEARING

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16 International Trade Commission

17 500 E Street, S.W.

18 Washington, D.C.

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20 Friday, September 11, 2026

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24 The Markman Hearing commenced, pursuant to the notice
25 of the Judge, at 9:31 a.m. Eastern.

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Page 7 1 PROCEEDINGS 2 (9:31 a.m.) 3 JUDGE BHATTACHARYYA: We're here for the Markman 4 hearing in Investigation 1495, Certain Video-Capable 5 Electronic Devices, Including Smart Televisions, Monitors 6 and Components Thereof. I'm ALJ Bhattacharyya. With me is 7 my attorney advisor Amy Ames. 8 Could the parties please enter their 9 appearances. 10 MR. STEVENS: Good morning, your Honor. Scott 11 Stevens from Alston & Bird on behalf of the Complainants. 12 With me are Emory Bums, Phillip Ducker, Andy Ligotti, Nick 13 Tsui, Sarah Moyer will be in charge of our graphics today, 14 Stephen Lareau. 15 From our client, Leslie Lee, assistant general 16 counsel of InterDigital, and Adam Swain next to her. And 17 then Farrah Baer and Taylor Bingham in the back row. Good 18 morning, your Honor. Nice to be back in your courtroom. 19 JUDGE BHATTACHARYYA: Good morning. Thank you. 20 MR. MOORE: Good morning, your Honor. I am 21 Steve Moore from the law firm of Vanguard Crest on behalf 22 of the TCL entities. With me in the courtroom today is 23 Mr. Don McPhail and Ms. Kayley McPhail. 24 MR. GOULET: Good morning, your Honor. This is 25 Paul Goulet with FisherBroyles on behalf of the Hisense	Page 9 1 MR. TSUI: Good morning, your Honor. Nick Tsui 2 on behalf of the Complainant. If you've got the 3 demonstratives passed around, may I proceed? 4 JUDGE BHATTACHARYYA: I'm having a little 5 trouble hearing you. Could you speak closer to the 6 microphone? 7 MR. TSUI: Yes, I think so. 8 May I proceed, your Honor? 9 JUDGE BHATTACHARYYA: Yes, please go ahead. 10 MR. TSUI: As Mr. Stevens mentioned, your Honor, 11 just as a brief overview, there are six patents asserted in 12 this case, and all of them have to do with some aspect of 13 video decoding or video reproduction at an end consumer 14 device. The parties have briefed eight total terms across 15 all six patents, and so just to get right into it, if we 16 could go to slide 5. The first patent with disputed claim 17 terms, your Honor, is the '846 patent. 18 By way of background, the '846 patent is about 19 decoding digital video. So at a very high level, and I 20 know your Honor has seen video coding patents before, but 21 in order to officially transmit and store video for 22 applications by video streaming, the original video out of 23 a video camera is converted into a bit stream of ones and 24 zeros, and then the encoder typically compresses that bit 25 stream into fewer ones and zeros, using methods that we'll

Page 10 1 discuss in a moment. And then the encoded and the 2 compressed bit stream can be stored and transmitted to a 3 consumer device that has a decoder that will decompress the 4 data and decode the bit streams of ones and zeros back into 5 the original picture so that the user can watch it. 6 So modern movies and television shows are so 7 large in terms of data, this encoding and decoding process 8 is basically the only way that streaming a video is 9 possible. 10 One of the key aspects, turning to slide 7, of 11 video coding is compressing the data. Each frame of a 4K 12 video has over eight million pixels, and most TVs have 60 13 frames a second, maybe 120 frames a second, fancy ones 14 maybe 240 frames a second. So it's an enormous amount of 15 data. 16 So a key property that allows for compression in 17 a continuous video is that most of any given frame is the 18 same as the frame before and it's the same as the frame 19 after. So some things change, some things move. But a lot 20 of the picture stays the same. 21 What you do is you partition the frame into 22 chunks so you can see what parts of the frame are the same 23 versus what parts of the frame might be different. 24 One common partition I've shown here on the 25 slide in yellow is called a slice. I've shown it here as a	Page 12 1 save data. So the first type of redundancy within a frame 2 is also called spatial redundancy, as we're showing on 3 slide 9. 4 Keeping with our blue sky example, we can see 5 that instead of repeating the pixel values for the sky over 6 and over again, the bit stream instead can just have 7 information that indicates that the pixels in a particular 8 block of sky can just reuse pixels from another block of 9 the same sky. That takes less data and makes the bit 10 stream smaller. 11 So in this example shown with the red arrow, a 12 particular pixel values in the block on the bottom left 13 don't need to actually exist in the bit stream again for 14 the decoder to receive. The decoder instead could predict 15 the value of those pixels based on reusing the pixels in 16 the block above it shown by the red arrow. 17 That type of prediction based on spatial 18 redundancy is called spatial prediction or intra 19 prediction. 20 The second type of redundancy we talked about 21 was redundancy between frames, also as I mentioned called 22 temp redundancy. So here, instead of predicting pixels 23 based on pixels in the same frame, we would be looking at 24 pixels in frames that came before or frames that came 25 after.
Page 11 1 horizontal rectangle, but a slice can be any size and any 2 shape you want. And the entire frame, for example, can be 3 one big slice if that's what you want to do. 4 But the slice then is typically broken up into 5 smaller blocks of pixels, and here again you can use any 6 size of blocks that you want. Some of the bigger blocks 7 are usually called super blocks or macro blocks and the 8 smaller blocks are typically called subblocks. 9 But you want to partition the picture frame into 10 blocks that allow you to take advantage of the redundancy 11 in the frames. 12 Now, there are two types of redundancies, if we 13 look at slide 8, that are used in video coding. There's 14 redundancy within a frame, and so for example, shown here 15 in red on the left, you can see that there is blue sky. 16 And all the parts of the sky look basically the same as all 17 the other parts of the sky. That's redundancy within a 18 frame. 19 And so another type of redundancy is redundancy 20 between frames. So the example here, shown on the right in 21 blue, is that we have a car that travels across the frame. 22 And that car is basically the same car, it just changes 23 position across the frame. That is called temporal 24 redundancy. That's redundancy between frames. 25 And we can use these types of redundancies to	Page 13 1 In this example, as we discussed, the car 2 basically looks the same as it drives across the screen. 3 So the bit stream doesn't have to have all the pixel values 4 for the car in every single frame. What it can do is tell 5 the decoder just go look at the pixel frames from the car 6 in one of the other frames and use that to predict what the 7 car is going to look like in this frame. It can use the 8 one before, after, or it can use both. 9 That type of prediction that uses temporal 10 redundancy is called temporal prediction or inter 11 prediction. 12 Now, at the time of the '846 patent, these two 13 types of predictions, intra and inter, they were well 14 known. This is on slide 11. They were referred to in 15 numerous video coding standards, Mike MPEG 2, H.264, people 16 of ordinary skill in the art at the time, they recognized 17 and understood what these terms meant and that these terms 18 were terms of art. 19 The problem that the '846 inventors identified 20 was that you had to use them separately. You couldn't use 21 intra prediction in combination with inter prediction. 22 They were two different techniques, required different 23 information. 24 So you were either looking at the frame 25 spatially or you were looking at a different frame

Page 14 1 temporally. You had to choose one or the other separately 2 as the patent says. It was not known at the time how you 3 could combine them. 4 But the inventors of the '846 patent were the 5 first to recognize if you could combine them, you could get 6 even better prediction and use even fewer bits. So the 7 inventors came up with what they called hybrid predictive 8 bi-predictive coding mode that could combine two or more 9 predictions. This is on slide 12. 10 One example they gave, a combination of intra 11 prediction with inter prediction. But the patent goes on 12 to say, as highlighted at the bottom, that embodiments of 13 the invention provide several new macro block 14 bottles/types. 15 One example of that as I have on the right side 16 of the slide is that if one neighbor is a hybrid 17 inter-intra but the other is not, then the overall 18 prediction type would still be considered this new hybrid 19 mode that the inventors created. I'm sure we'll get into 20 that more as we go along here, but there are three terms in 21 dispute for the '846 patent, and they all have to do with 22 these concepts of intra, inter or hybrid prediction. 23 The first disputed term is "intra prediction," 24 which is one of the concepts we just talked about. Now, 25 both parties say this term is understood by its plain	Page 16 1 what the upper right of the slide shows as well on the 2 spec, intra prediction uses spatial samples within the same 3 frame or picture. 4 There's some examples that are shown on the 5 bottom of the slide on the left. The patent says "intra 6 coded does not use temporal prediction. The pixel values 7 of the current macroblock are first spatially predicted 8 from their neighboring pixel values." 9 The patent chose an example in figure 1 on the 10 left and describes intra prediction mode, the 33 11 neighboring samples immediately above or to the left, are 12 used for prediction. And that's the other passage on the 13 bottom right. 14 That's how the patent describes intra 15 prediction. It's not limited to the Respondents' proposal 16 of locating a matching or similar block in that same 17 picture. 18 The plain and ordinary meaning cannot properly 19 read out these preferred embodiments or add limitations 20 that are just not there, not under plain and ordinary 21 meaning. 22 If we look at the top right, as the patent 23 points out, I have underlined in red, "intra prediction" is 24 a term that is understood and used in video coding 25 architectures and standards, like MPEG 2 and H.264.
Page 15 1 meaning, but Respondents want to further construe the term 2 as a prediction for a block in the picture obtained by 3 locating a matching (similar) block in that same picture. 4 They want to do that so they can exclude what 5 everyone knows to be the plain meaning of "intra 6 prediction." 7 As we're going to see, Respondents' construction 8 is not the plain meaning, so Respondents fall back on 9 arguments about it being lexicography or disclaimer based 10 on the prosecution history. But the Federal Circuit has 11 repeatedly said that the standard for lexicography or 12 disclaimer to deviate from plain meaning is a high one, it 13 requires clear and unmistakable evidence. 14 If there's any ambiguity, then there's not going 15 to be disclaimer or disavowal of claim scope. So I'll 16 address each of the Respondents' arguments in turn and 17 explain why it is each of them fails. 18 Turning to slide 14, first with respect to plain 19 meaning, what the patent says about intra prediction is 20 that intra coding is predicted using spatial prediction 21 methods. So just to be clear, as highlighted here on the 22 upper left, the patent says "prediction (coding)." 23 In this context, intra coding or intra 24 prediction is predicted using spatial prediction methods, 25 just like we talked about in the background. And that's	Page 17 1 If we look at video coding architectures and 2 standards, we see "intra prediction" is a term that's 3 recognized in the industry. The AV1 specification on the 4 top left says "values in the same decoded frame," 2019, 5 H.264 in 2003 said it was samples of the same decoded 6 slice. H.265 in 2013 said it was sample values of the same 7 decoded slice. 8 These definitions span from 2003 to 2019, and 9 they show that persons of ordinary skill all know what 10 intra production means. That understanding has been 11 consistent for at least 16 years. And they all knew it's 12 not limited to Respondents' proposed construction. 13 Turning to slide 16, that's exactly what the 14 prosecution history says. During prosecution, the 15 applicant said "prediction is a term of art, as are intra 16 prediction and inter prediction." That's what we just saw 17 when we looked at the patent specification and video coding 18 specifications and standards. 19 Respondents' construction comes from right here, 20 it says "as is known, intra prediction involves," and rest 21 of the highlighting below that, "a pixel in the block in 22 the picture is obtained by locating a matching similar 23 block in the same picture." That's Respondents' 24 construction. Now, we've already seen that that's not the 25 plain and ordinary meaning.

Page 18 1 So Respondents say within its lexicography. But 2 under Federal Circuit law, Federal Circuit law says that 3 lexicography requires a special definition, something to 4 clearly indicate the patentee's intent to give a unique 5 meaning, something different from its ordinary and 6 customary meaning to one of skill in the art. 7 That's not what the applicants did here. They 8 didn't say they were defining this term different than the 9 customary meaning. What they said is that was a known term 10 of art, and they're referring to the customary meaning. 11 So the signals that their intent was that the 12 term to have the meaning that it already has in the art. 13 The Federal Circuit has dealt with situations 14 with known terms of art, and it has said that simply a 15 general explanation of certain aspects is not going to show 16 that the inventor intended to redefine the claim term. 17 As the applicant said here, "as is known, intra 18 prediction involves," and then they provide a general 19 explanation of certain aspects of intra prediction. That's 20 not lexicography under Federal Circuit law and does not 21 show a clear intent to redefine the term away from its 22 ordinary and customary meaning. 23 Numerous district courts have said the same 24 thing. District courts have looked at descriptions and the 25 specification that involve certain details, and those	Page 20 1 nonconventional. Nothing here that distinguishes the art 2 from matching blocks and locating matching blocks in the 3 same picture and nothing about intra prediction. 4 Respondents admit that in their briefing. This 5 is the Respondents' brief where they say "after defining 6 inter prediction, motion determination as disclosed by 7 Alvarez does not correspond to a prediction as known in the 8 art." 9 Here too, nothing about intra prediction, 10 nothing about locating a matching block being a distinction 11 over the prior art. The distinction was inter prediction 12 and motion determination. 13 Now, turning to slide 22, all of that that we 14 just discussed was an October 2010 response. In the next 15 response, in February of 2011, the applicant said the 16 claims were "directed to block-based, i.e., block matching 17 video decompression, where a current block to be decoded is 18 matched with the reference block in the same picture intra 19 prediction or in another picture" from the same sequence, 20 inter prediction. This is another excerpt Respondents 21 point to. 22 But again, there is not a clear intent to 23 redefine the term away from its plain meaning, as opposed 24 to a general explanation of certain aspects. If it was a 25 definition, we would expect the same words to be used as
Page 19 1 courts have said that's not enough to have a clear 2 indication of a definition or that the claim should be 3 limited to those types of embodiments. 4 Nor is there any disclaimer, turning to slide 5 19. The paragraph that Respondents' construction comes 6 from here, I've marked it in blue, but the Federal Circuit 7 says we can't just look at isolated statements. We need to 8 consider the context of the entire prosecution history, and 9 there's a high standard for prosecution disclaimer. 10 We look at the context around the bracket, we 11 can see that the sentence Respondents rely on about 12 locating a matching block is never mentioned again. It's 13 never used to distinguish the prior art. 14 Turning to slide 20, I've blown out the 15 highlights that make it a little easier to read, but if you 16 look at the top, the applicant said that the prior art 17 Alvarez "discloses that the resulting motion determinations 18 produced by intra frame motion analyzer 401 and inter frame 19 motion analyzer 402." 20 The applicant say below, "a motion mention as 21 disclosed by Alvarez does not correspond to a prediction as 22 known in the art," because Alvarez requires nonconventional 23 elements. 24 We can see here the focus was on motion 25 determinations and how this reference Alvarez is	Page 21 1 were used previously. But they're not, because the 2 applicants were not redefining the terms to a special 3 definition. They're just simply giving a general 4 explanation of certain aspects. 5 That's what district courts have said too. 6 Turning to slide 23, district courts have examined 7 directed-to language, and they said that's not ordinary 8 meaning, not lexicography, and that's not disclaimer. 9 Instead they said that seems most like an 10 argument based on a restriction to a single embodiment, in 11 which the Federal Circuit has repeatedly objected to one of 12 the cardinal sins of patent law. 13 Nor was there any disclaimer. So again, I have 14 bracketed at the top the part that Respondents rely on. 15 And again we don't just read statements in isolation. We 16 have to read the full context of the prosecution history. 17 So I've blown this up again on slide 25. 18 We can see the full context of the applicant's 19 response. The applicant said "In contrast, Ozcelik is 20 directed to regenerating dense motion vector fields, a 21 technique that does not at all correspond to block-based 22 decompression." 23 "Inter prediction, a single motion vector is 24 generated for a block." 25 Then it says below, "However, in Ozcelik's

Page 22 1 approach based on regenerating dense motion vector fields, 2 each pixel element, pixel, in a dense motion vector field 3 has a motion vector associated with it." 4 We can see what the applicants were focused on 5 here was inter prediction not intra prediction. And the 6 applicant's statements distinguish that inter prediction, 7 and that Ozcelik in the prior art had a motion vector for 8 each pixel as opposed to a single motion vector for a block 9 in conventional inter prediction. No distinction is being 10 made here on intra prediction and there's nothing in here 11 about locating any matching blocks. 12 So in sum, your Honor, Respondents' construction 13 should be rejected as not being the plain meaning, and 14 improperly excluding preferred embodiments in the 15 specification, nor can it meet the high bar for 16 lexicography or disclaimer, which requires clear and 17 unmistakable evidence, and there cannot be any ambiguity 18 under Federal Circuit law. 19 What we're looking for, and I have it at the 20 bottom here, words or expressions of manifest exclusion or 21 restriction. We don't have anything like that here. 22 "Inter prediction" is a term of art, persons of 23 ordinary skill recognize the term, and it doesn't need to 24 be construed beyond that. 25 Thank you, your Honor.	Page 24 1 these claims with just a plain and ordinary meaning without 2 further understanding of what that means. 3 And, of course, that's across all of the 4 patents. 5 So the Federal Circuit in the Avid case in 2016 6 said "the same of construction is to give the finder of 7 fact an understandable interpretation of claim scope." 8 That's what we're here to do is an understandable 9 interpretation of claim scope. 10 The Federal Circuit in 2008 in the O2 Micro case 11 said "when the parties present a fundamental dispute 12 regarding the scope of a claim, it is the court's duty to 13 resolve it." 14 When the Complainant identified -- objected to 15 the proposed constructions that the Respondents provided, 16 that identified the particular dispute. Plain and ordinary 17 meaning just leaves it unresolved. 18 So the O2 Micro case requires the court to give 19 a real meaning to the claim terms. 20 So the requested constructions, starting with 21 inter prediction. The plain and ordinary meaning, which is 22 "a prediction for a block in a picture obtained by locating 23 a matching or similar block in that same picture." And the 24 rest of the proposed constructions are listed here as well. 25 So the ground rules in this case require that at
Page 23 1 JUDGE BHATTACHARYYA: Thank you. 2 MR. TSUI: Happy to answer any questions that 3 you have or cede the podium. 4 JUDGE BHATTACHARYYA: No questions at this time. 5 MR. MOORE: May I approach? 6 JUDGE BHATTACHARYYA: Yes. 7 MR. MOORE: Good morning, your Honor. 8 JUDGE BHATTACHARYYA: Good morning. 9 MR. MOORE: I do apologize. I apologize for 10 that. 11 JUDGE BHATTACHARYYA: It's no problem. 12 MR. MOORE: So good morning. So the discussion 13 this morning is going to focus predominantly on the '846 14 patent for the first few terms, and like opposing counsel 15 said, there's a lot of common themes in the three terms 16 related to the '846. 17 Throughout this entire process, the Complainant 18 has offered only one proposed construction for any term and 19 every term asserted in the case, and that's the plain and 20 ordinary meaning. Without telling us what that plain and 21 ordinary meaning is. 22 Unfortunately, in that process, that leaves all 23 of the claims that we're here to construe, it leaves the 24 scope completely unresolved. So one of ordinary skill in 25 the art wouldn't even understand the metes and bounds of	Page 25 1 the hearing, unless otherwise ordered, the claim 2 construction hearing will be limited to up to eight times, 3 and the parties will be amenable to resolution in the 4 Markman process that are likely to be significant in 5 resolving the parties' disputes. 6 Plain and ordinary meaning hasn't told us 7 anything that could be used to resolve a dispute. Whereas 8 the constructions the Respondents and Intervenor offer are 9 directed to that precise issue. 10 So intra prediction. The Complainants 11 obviously, plain and ordinary meaning. And the dispute is 12 must intra prediction locate a matching block in the same 13 picture. 14 Both predictions concern the same current block, 15 and the claim distinguishes them as intra or inter. When 16 the first prediction is in the current block, it's intra 17 prediction, and the second prediction in the current block 18 is inter prediction. 19 So the construction explains what makes the 20 first one intra. In the file history, in a response in 21 October 27, 2010, the applicant called the prediction a 22 term of art, but then explained what that meant. 23 So in other words, yes, it's plain and ordinary 24 meaning, but the applicant provided what that meaning is 25 when they said "an intra prediction involves partitioning

Page 26 1 of a current picture to be encoded or decoded into a 2 plurality of blocks where a prediction for a block in the 3 picture is obtained by locating a matching similar block in 4 that same picture." 5 And remember, plain and ordinary meaning, the 6 rest of that law requires plain and ordinary meaning to a 7 person of ordinary skill in the art, having read the patent 8 and the file history. 9 Here the applicant tells us very explicitly what 10 the plain and ordinary meaning is. It says it's known, 11 this is what it is. 12 Again, in October 27, the response connects the 13 concept directly to the claims. So a few moments ago, you 14 heard that the comments are disembodied from the allowance, 15 but that's not really what the argument was. 16 Hence, based on the proceeding, it's readily 17 evident that a motion determination as disclosed by Alvarez 18 does not correspond to a prediction as known in the art and 19 recited in the claims. 20 And that's the important piece, because they are 21 drawing a correlation directly to the claim language, and 22 that's what the Complainants miss. 23 Again in February 2011, for example, each of the 24 above reproduced claims recites language directed to block 25 based, i.e., block matching video compression, where the	Page 28 1 Unfortunately, it's a little bit misstated. 2 Their citation to Pacific Biosciences is at page 7, but if 3 you read the case, it goes on, and the Court -- their 4 conclusion actually is consistent with the file history. 5 And you can see that at pages 20 and 21, where the Court 6 used the elements distinguishing Hibbs, the prior art, to 7 confirm the meaning of the claim term. 8 So while the case has other content in it that 9 they cite to at page 7, the Court concluded that the 10 applicant's statements limit the claims. 11 Here we're asking for exactly the same thing. 12 They use block matching to distinguish Alvarez. A 13 prediction for a block in the picture is obtained by 14 locating a matching similar block in the same picture. 15 That's what the patentee said the plain and 16 ordinary meaning was, and that's what it should be limited 17 to. 18 Now, the argument of block size that was raised, 19 it can -- the use of the word "block" can include macro 20 blocks or even smaller partitions. A rectangular group of 21 adjacent pixels of any dimension, such as whole 16-by-16 22 macro blocks and other submacroblock partition. 23 So block isn't limited to block size. In the 24 picture identifies the location of the matching block. 25 So spatial prediction passages don't displace
Page 27 1 current block is to be decoded is matched with a reference 2 block in the same picture, intra prediction, or in another 3 picture from the same video sequence, which would be inter 4 prediction. 5 It's the same picture matching is what's 6 described in the claims. So the linkage to the discussion 7 of what the applicant believes is the plain and ordinary 8 meaning is directly to the claim language. 9 The prosecution statements independently support 10 the proposed construction. The applicants supplied the 11 meaning. The applicant distinguished the prior art. The 12 applicant used same-picture block match to explain 13 predictions recited in the claims, and those statements 14 also support prosecution disclaimer. 15 Other distinctions don't withdraw that 16 statement. The response additional arguments against 17 Alvarez don't undo what the applicant said with respect to 18 the prior art, what the applicant meant by intra 19 prediction, and what the claim language should be 20 interpreted to mean. 21 So again, the applicant should be held to the 22 scope it represented during prosecution. 23 Now, one of the cases that the Complainants 24 bring up to kind of dissuade the Court from using this 25 analysis is the Pacific Biosciences case.	Page 29 1 the applicant's prosecution statements. The Complainants 2 rely on spatial prediction disclosures, say the 3 specification discloses neighboring examples included in 4 the hybrid embodiment. 5 The Respondents' construction rests on what the 6 applicant later told the examiner. 7 So in the process of obtaining a patent, an 8 inventor may think they have invented something very 9 important, and they may have. But until the process of 10 examination goes on, that's when they fully understand when 11 they see the prior art that the examiner is using what they 12 limit their invention to. 13 Realistically, that's all that happened here. 14 So other things that are in the specification 15 can't avoid the statements that the applicant made 16 overcoming the prior art and getting the claims allowed. 17 So the requested construction follows the 18 applicant's own words. The plain and ordinary meaning, 19 which is a prediction for a block in the picture obtained 20 by locating a matching or similar block in that same 21 picture. 22 The applicant gave this meaning to the examiner 23 and repeated same picture block matching requirement even 24 in a later response. The claims were issued based on that 25 record. "Intra prediction" should carry that meaning

Page 30 1 throughout the '846. 2 JUDGE BHATTACHARYYA: Thank you. I do have a 3 couple of follow-up questions. 4 Complainant's counsel referred to some 5 definitions of "intra prediction" that they say are broader 6 than what you've proposed and that they say are definitions 7 that were used in the art. 8 Do you disagree that there were broader 9 definitions of "intra prediction" in the art at the time? 10 MR. MOORE: There were. But what's important 11 here is a person of ordinary skill in the art, what would 12 they believe the plain and ordinary meaning to be after 13 having read the specification and the file history, right. 14 So it isn't disembodied from the intrinsic 15 record. It's what would a person of skill understand it to 16 mean after having read the inventor's own words. 17 JUDGE BHATTACHARYYA: Okay. And then I'm trying 18 to understand the substantive difference between a more 19 general definition of "intra prediction" and the one you 20 have proposed about matching blocks. 21 Can you explain sort of a situation that would 22 fall into what Complainants are proposing versus the 23 matching block scenario? I'm not asking for -- 24 MR. MOORE: Sure, sure. 25 JUDGE BHATTACHARYYA: -- noninfringement	Page 32 1 comments. 2 MR. TSUI: I do have just -- counsel here was 3 quite brief so I'll try to be as brief as well. But I 4 department to address some of the statements and questions 5 that you had. 6 It sounded to me like Respondents are saying 7 that they know this isn't the plain and ordinary meaning of 8 what they're trying to ask for here, that they know the 9 plain and ordinary meaning, everyone knows what the term of 10 art is, and if I could put on the document camera, I think 11 he had on his slide, this is the -- this is the preferred 12 embodiment of the specification that they want to read out. 13 So they know this is not plain and ordinary 14 meaning, they know this is not the definition that everyone 15 in the art understands this term to mean. What they want 16 to do is they want to actually just read out preferred 17 embodiment, which the Federal Circuit says you can't do 18 that without highly persuasive evidence. Otherwise, it's 19 just rarely, if ever, correct. 20 JUDGE BHATTACHARYYA: Can you explain this 21 example and how it's not a matching block example? 22 MR. TSUI: I'm sorry, your Honor. Could I ask 23 you to repeat that? 24 JUDGE BHATTACHARYYA: This example that you have 25 up, could you explain what it is and then why it's not a
Page 31 1 arguments. I'm just trying to understand. 2 MR. MOORE: No, no, no, I completely understand. 3 We believe the patent should be limited to what 4 the inventor said it was. I mean, every inventor has their 5 own right to define their invention. That's what the 6 process is. They wrote the applicant with a patent 7 attorney. They argued with the examiner. They said what 8 does it mean, what does it not mean, and they related it 9 directly to the claims. 10 And in that sentence, he said it is known in the 11 art, and this is what it means. So whether some other 12 person, some other skilled artisan, would have some other 13 meaning for it isn't really all that relevant. 14 What is relevant is this inventor said it is a 15 term in the art, and this is what it means, and this prior 16 art doesn't have what is in my claims, right. 17 So I believe it's fair to let the person talk 18 for themselves, and they did. 19 JUDGE BHATTACHARYYA: Okay. Thank you. 20 MR. MOORE: I believe -- 21 JUDGE BHATTACHARYYA: If Complainants have 22 anything they want to add in rebuttal or in 23 supplementation, they are free to do so. 24 MR. STEVENS: Yes, my colleague could just take 25 a quick moment and address your questions and some other	Page 33 1 matching block example? 2 MR. TSUI: Yes, your Honor. 3 So as we -- as we discussed earlier and what is 4 talked about in specification is that what intra prediction 5 is known in the art to be is spatial redundancy, looking 6 for neighboring pixels and using those to predict the 7 current pixels. 8 That's what this picture is showing here. 9 They're showing so the block that you want to predict is 10 the a through p, and what the specification says is what 11 you do is you can use the neighboring pixels at the top of 12 it or to the left of it. Doesn't say anything about having 13 to match a block or do this process of looking for blocks 14 and seeing if they're similar. 15 It just says one of the -- in fact, the 16 preferred embodiment is you just look at the pixels that 17 are nearby and you can use those to predict the pixels that 18 are in the block that you want. That is the embodiment 19 that I think, and I'm sure counsel will correct me if I'm 20 wrong, but I think Respondents said they know they are 21 trying to read out the preferred embodiment of the 22 specification. 23 And the justification, they say, for doing that 24 would be the prosecution history. 25 Now, what the prosecution history says that we

Page 34 1 saw, and what he says here in his slides, is that the 2 applicants recognize that is a term of art. They didn't 3 then go on to say I'm going to change that, I'm going to 4 redefine and give my own special definition in clear and 5 unmistakable terms, which is what the Federal Circuit 6 requires, to say I am not going to use the ordinary 7 meaning. 8 What they said is this is a term of art, and as 9 is known, it involves, this is what the Federal Circuit has 10 dealt with these kinds of things before where they said 11 that's a general explanation. That is not a limiting 12 statement. It doesn't rise to the standard of the high bar 13 of lexicography. 14 Now, they also talk about disclaimer, and I 15 think this is the slide that he put up about that to say 16 well, look, in the case, the Court talked about how those 17 statements were used to distinguish the art. 18 As we went through and looked at each of the 19 statements that were actually made during prosecution 20 history, this locating a matching block or intra 21 prediction, they were never used to disclaim anything. 22 They were never used to distinguish any prior art. 23 That's actually what Respondents just showed 24 here as well. What they said is that it was motion 25 determination. That's what the applicants used to	Page 36 1 picked it up and the debate began. 2 Now, it isn't that we're reading out the 3 preferred embodiment. We're giving credence to what the 4 inventor said. The inventor said this is a term of art, 5 and this is what it means, and went on to say these prior 6 art references don't have that in them like my claims do. 7 So whatever picture they point to, yes, that is 8 in the specification. No, we're not reading it out. What 9 we're doing is we are following what the inventor said when 10 asked by the examiner, nothing more or less. 11 JUDGE BHATTACHARYYA: Okay. Thank you. 12 MR. MOORE: Okay. There's going to be some 13 commonality here with the previous term, so hopefully it 14 will help us stay on target a little bit, myself 15 predominantly. 16 The next term that we have in dispute is in 17 claim 2 and claim 19, it's "first prediction type and 18 second prediction type." 19 The Respondent and Intervenor's position is that 20 these should be given their plain and ordinary meaning, 21 which is intra prediction and inter prediction. And the 22 dispute comes down to may any two prediction types form the 23 claimed hybrid prediction type. 24 And that's the key, is every instance of the use 25 of first prediction second prediction is tied to the hybrid
Page 35 1 distinguish Alvarez. There was nothing here about locating 2 a matching block, so there's no disclaimer. 3 Returning to the first point that Respondents 4 made was what is the dispute here. Must intra prediction 5 locate a matching block in the same picture? That's the 6 dispute. 7 02 micro only requires your Honor to resolve the 8 dispute, does not require your Honor to give a plain and 9 ordinary meaning construction to every term that's 10 disputed. If the answer to that question is no, the 11 dispute is resolved. That's what the ITC has said numerous 12 times, it's what the Federal Circuit has said numerous 13 times. We have all the cases in the briefing what the 14 Federal Circuit has said, that plain meanings do not 15 require additional construction. 16 If the proposed construction erroneously reads 17 limitations into the claims, then the Court properly 18 rejected the construction and resolved the parties' 19 dispute. And that's all that's required. 20 JUDGE BHATTACHARYYA: Thank you. 21 Mr. Moore? 22 MR. MOORE: Just a brief comment. 23 When the patent application specification was 24 written, the inventor said what they said in their -- in 25 the specification. And then a few years later, an examiner	Page 37 1 prediction type, even in the claim. 2 So hybrid prediction type identifies a 3 combination that the claim requires. So in claim 19, it 4 basically says in the wherein clause, "wherein the 5 combination of the first prediction type and the second 6 prediction type forms a hybrid prediction type." 7 The construction gives effect to claim 19's own 8 words of hybrid. 9 So in construction of claim elements, the claim 10 that it lives in is likely the best guide for what they 11 mean. Here it forms a hybrid prediction type, and that's 12 what's important. 13 So figure 9A, the figure labels intra and inter. 14 "The disclosed hybrid bi-predictive coding mode allows both 15 intra frame and inter prediction to be combined together." 16 The two claim types are intra and inter. 17 "Bi-prediction using two intra predictions, 18 bi-prediction may be used also in I-pictures with the 19 combined intra-intra prediction. These two intra 20 predictions could use two different intra predictions." 21 But that's not the hybrid bi-predictive coding. 22 The disclosed hybrid bi-predictive coding mode 23 allows both intra frame intra and inter frame inter 24 predictions to be combined together. A disclosure of other 25 bi-prediction modes doesn't remove the word "hybrid" from

Page 38 1 claim 19. 2 That is the key to understanding that the first 3 and second prediction types claimed in claim 19 are intra 4 and inter respectively. 5 So the applicant expressly included claim 19 in 6 its explanation of hybrid prediction. "Combine an intra 7 prediction and an inter prediction and/or form a hybrid 8 (inter-intra) prediction type as essentially recited in 9 claims 1, 9, 14, 15, and 19." 10 The applicant explicitly applied that meaning to 11 claim 19. The applicant contrasted the same type of 12 bi-prediction with the claimed hybrid in the office action 13 response of July 1, 2010, when they said "however, this 14 teaching of Machida can simply be considered to be similar 15 to bi-prediction, where two predictions of the same type 16 are combined. That is, in Machida, two predictions of the 17 same type (inter or intra) are combined in the coding 18 apparatus of figure 3." 19 The proposed construction preserves the 20 distinction that the applicant drew. Once again, all the 21 Respondents are asking for is the applicant's own words. 22 The examiner identified the combination of intra 23 and inter prediction. "Combining a first prediction of a 24 current block with a second prediction of a current block; 25 wherein the first prediction of the current block is intra	Page 40 1 claim 19 itself requires, it doesn't import words from 2 claim 1 through 19. 3 The intrinsic record supports the proposed 4 construction. The patent's terminology, the applicant's 5 statements about claim 19, and the allowance reasons all 6 identify intra-inter combination. 7 The savings clause doesn't override the claim 8 language. The specification's statement that some 9 embodiments are mere exemplary doesn't broaden the claim 10 beyond its own language. 11 First and second mean intra and inter in the 12 claimed hybrid mode. 13 So our requested construction. First prediction 14 type, second prediction type, is the plain and ordinary 15 meaning, which is intra prediction type and an inter 16 prediction type. Claim 19, the specification, the 17 prosecution record all identify intra prediction combined 18 with inter prediction. 19 JUDGE BHATTACHARYYA: Thank you. Just one 20 question about the meaning of "hybrid." It looks like 21 "hybrid" is a term in the claims. 22 MR. MOORE: It is. 23 JUDGE BHATTACHARYYA: But it's not part of what 24 we're -- it's not in the words that we're construing right 25 now.
Page 39 1 and the second of the current block is inter as recited in 2 all the independent claims." 3 The allowance record is consistent with the 4 application's own explanation of claim 19, and that was in 5 the notice of allowance. That's what the examiner said. 6 The examiner said it, the applicant said it, and 7 that should mean that a person of ordinary skill in the 8 art, having read the specification and file history, would 9 understand that to be the plain and ordinary meaning of 10 these terms. 11 The passage in column 9 doesn't give hybrid any 12 broader meaning. All possible combinations. The passage 13 refers to types in tables 1 through 3. Its hybrid example 14 pairs 4 by 4 intra with inter 16 by 8. 15 The null prediction type, the patent says null 16 prediction implies no prediction. It can't supply one of 17 the two predictions that combine to form the claimed 18 hybrid. 19 The neighbor's hybrid mode, the passage calls 20 the resulting block hybrid, inter-intra. It doesn't 21 identify hybrid as one of the component prediction types. 22 These passages retain the distinction between 23 component types and the combined mode. 24 And claim 19 supplies the limitation. The 25 construction explains that hybrid -- that the hybrid that	Page 41 1 MR. MOORE: It is not. 2 JUDGE BHATTACHARYYA: Is there a dispute over 3 the meaning of "hybrid" as well? 4 MR. MOORE: I don't believe there is. The 5 specification is clear on what the word "hybrid" means, and 6 that's also one of the primary reasons we believe the first 7 and second prediction types need to be construed as inter 8 and intra, because again, this is the hybrid mode that is 9 consistent with the specification, the file history, and 10 the inventor's own words. 11 JUDGE BHATTACHARYYA: Okay. So you believe it's 12 undisputed that "hybrid" means intra inter, a combination 13 of intra and inter? 14 MR. MOORE: I haven't heard that -- I haven't 15 heard any challenge on that from the Complainants. 16 JUDGE BHATTACHARYYA: Okay. All right. Thank 17 you. 18 MR. DUCKER: Good morning, your Honor. Phillip 19 Ducker for Complainant InterDigital. I'm going to address 20 this term -- and let me just get there. 21 So I guess I would start by saying that counsel 22 for Respondents kind of buried the headline in their last 23 slide. The dispute is not whether or not -- in our view, 24 the dispute is not whether any two prediction types can be 25 the first and the second.

Page 42 1 The dispute here is whether the definition of 2 intra prediction, which is what we heard in the last term, 3 needs to be imported into claim 19, which doesn't use the 4 words "intra prediction." So Respondents' construction 5 here is really attempting to capture their old construction 6 and import it into the one claim that doesn't have that 7 term, and that's important. 8 I would start by saying I don't think there's 9 any dispute over these -- the terms in the patent, in the 10 claim. I don't think there's a dispute over what first and 11 second means. I think you and I understand first and 12 second, and a person of skill in the art would certainly 13 understand first and second. 14 There's also no real dispute over whether how a 15 person of ordinary skill in the art would understand 16 prediction and the words "type." Those are easily 17 understood. 18 We saw in Mr. Tsui's presentation on slide 16 19 that the applicant noted that "prediction" is a term of 20 art. So despite the fact that these terms are not really 21 not understood, Respondents still seek to rewrite 22 easily-understood terms and replace them with specific 23 prediction types, namely intra prediction and inter 24 prediction. Again, they're doing this not because they 25 don't understand what a first and second type are but	Page 44 1 don't think this has the laser pointer -- is the language 2 at the end of claim 19, which is what Respondents seek to 3 replace essentially with the language at the bottom of 4 claim 14. 5 Claim 19, if rewritten as Respondents request, 6 would be entirely redundant of claim 14, thus Respondents' 7 construction violates the doctrine of claim differentiation 8 and should be rejected. 9 And I apologize, this is slide 31. 10 Turning to slide 32, Respondents' construction 11 also reads out a preferred embodiment. They talk -- 12 Respondents talked a lot about the prosecution history, 13 talking about hybrid means intra-inter, but there are other 14 embodiments in the specification. 15 Here at column 9, lines 59 through 63, the 16 specification discloses an embodiment in which one of the 17 predictions is itself a hybrid prediction intra-inter. In 18 this embodiment, because the first prediction type is 19 hybrid, the second prediction type could be any prediction 20 type and the resulting combined first and second would 21 still be hybrid. 22 JUDGE BHATTACHARYYA: And what's your 23 understanding of "hybrid"? Do you agree that "hybrid" 24 means inter-intra? 25 MR. DUCKER: No, we do not agree it means
Page 43 1 because they want to import their construction of inter 2 into the claim because it doesn't have that term. There 3 are multiple reasons why that should be rejected. 4 So first, the claims use different words, and 5 there is a presumption that when different claims use 6 different words, those different words have different 7 meanings. 8 As I mentioned, the independent claims, except 9 for claim 19, all include the term "intra prediction" and 10 the term "inter prediction." Claim 19 uses "first 11 prediction type and second prediction type." The only 12 limitation really is that the first and second aren't the 13 same type of prediction. 14 But there is no requirement that the first be 15 intra prediction and the second be inter. In fact, the 16 applicants, as we said, in every other claim used intra and 17 inter prediction, so they knew how to use those terms when 18 they wanted to in the claim, and here in claim 19 they 19 chose not to. 20 Claim differentiation also counts against 21 Respondents' proposed construction, because if it were 22 adopted, claims 14 and claims 19 would have an identical 23 scope. 24 The only meaningful difference between these two 25 claims is the language Respondents -- the language -- I	Page 45 1 intra-inter -- or inter-intra. It could mean inter-intra 2 and inter. And I have a little analogy on the next slide 3 that I think will help explain this from our point of view. 4 So what we have on the screen here is a hybrid 5 Prius, and why is it a hybrid? Because it has -- it 6 combines an electric motor with a gas engine. So here I 7 have the first and second power source. So whether the 8 first is a gas engine and the second is an electric motor 9 or vice versa, it's still a hybrid car. 10 Now, if I add a second electric motor, here we 11 have a front electric motor, a front gas engine, and a rear 12 electric motor, that does not mean this Toyota is no longer 13 a hybrid car. It's still hybrid. It is still a 14 combination of an electric motor, in this case motors, and 15 a gas engine. 16 And even if I replace the gas engine with a 17 hydrogen engine and I keep an electric motor, that is still 18 a hybrid. It has two different sources of power. 19 JUDGE BHATTACHARYYA: All right. And so in the 20 context of our technology, what are the different choices 21 for prediction types? 22 MR. DUCKER: So it could be intra first, inter 23 second. That could also be reversed. It could also be 24 something that is an intra-inter, something that has 25 already -- it has a bi-prediction, a hybrid prediction,

Page 46 1 with another independent inter or intra. And then of 2 course it could be two hybrids combined together still 3 equal a hybrid. 4 JUDGE BHATTACHARYYA: So if it were two hybrids, 5 two hybrids, you would say the first hybrid is a different 6 prediction type than the second hybrid? 7 MR. DUCKER: Yes. 8 So a construction that excludes a preferred 9 embodiment is rarely, if ever, correct. If embodiment here 10 talks about the fact that there can be more than two 11 predictions. I think this goes to that hybrid I was 12 talking about, where you have a hybrid plus an inter or 13 intra. And Respondents' construction would read this out. 14 So there is no disclaimer or lexicography 15 either. I don't believe Respondents actually argue this. 16 They say that this hybrid intra-inter was used to 17 distinguish the prior art. It is close but not quite 18 accurate. 19 The prior art contained a single prediction 20 type, either as we see at the bottom here, in Martemyanov, 21 each macroblock can be intra or inter coded. So the fact 22 that there was only one type of prediction that 23 distinguished the prior art, not the fact that it was intra 24 and inter. It could have been other embodiments as well. 25 Unless you have any other questions, I'm done.	Page 48 1 between intra and inter. 2 And finally, the specification, the examiner's 3 arguments, the applicant's own words, and the examiner's 4 reasons for allowance are all consistent with the 5 construction that we're asking for from the Court. 6 JUDGE BHATTACHARYYA: With respect to the 7 question of whether this dispute is material if 8 Complainant's construction of intra is adopted, could you 9 address that point or are you prepared to address that 10 point? 11 MR. MOORE: I think this claim is still material 12 in terms of -- this dispute is still material in terms of 13 what does hybrid mean. And if intra has no regard to what 14 the examiner and the applicant said they meant it to be, I 15 don't think that changes whether or not hybrid still needs 16 to include an intra and an inter prediction. 17 JUDGE BHATTACHARYYA: Okay. Thank you. 18 MR. DUCKER: I'll be very quick. 19 JUDGE BHATTACHARYYA: Okay. 20 MR. DUCKER: We're not disputing -- there is no 21 dispute that intra-intra is hybrid or inter-inter is 22 hybrid. It is simply that there are two different types of 23 predictions. It could be intra and inter or it could be 24 hybrid and intra. Those would all, you know, be a first 25 prediction type and a second prediction type.
Page 47 1 JUDGE BHATTACHARYYA: Only a question about your 2 opening. You seemed -- or did you indicate that this 3 dispute is not material if your construction of intra is 4 adopted? 5 MR. DUCKER: Other position would be this 6 dispute is not material if our construction -- I don't 7 think Respondents would continue to have a problem with 8 this term if our construction of intra prediction were 9 adopted. 10 JUDGE BHATTACHARYYA: Okay. Thank you. 11 MR. DUCKER: But they can answer that as well. 12 MR. MOORE: Just to respond to a few things. 13 Claim differentiation. If you look at claim 14 14 and you look at claim 19, there's a very important 15 distinction between the two. Claim 19 uses hybrid mode. 16 Claim 14 does not. 17 So claim differentiation is not really an issue 18 here. 19 Secondly, if hybrid doesn't mean intra-inter, 20 then we need to revisit whether or not we have a 112 issue 21 in this case. There isn't a mention in the specification 22 of inter-inter being hybrid, inter-intra-intra being 23 hybrid. 24 There is a mention of one hybrid combined with 25 something else being hybrid, because it's already a hybrid	Page 49 1 It sounds like they want to construe hybrid but 2 we're here to construe first prediction type and second 3 prediction type, which I think are easily understood by the 4 person of skill in the art. 5 JUDGE BHATTACHARYYA: All right. I'm a little 6 confused as to why you think hybrid-hybrid are two 7 different prediction types. I don't know that it matters, 8 but if you could briefly explain that to me, it would be 9 helpful. 10 MR. DUCKER: Yeah, so it could be that you have 11 a hybrid that is an intra with some other in the patent 12 they call it null prediction type, and then you have an 13 intra-inter. So in those cases, you would have two 14 hybrids, but they wouldn't be identical types of hybrids. 15 JUDGE BHATTACHARYYA: Okay. Understood. Thank 16 you. 17 Anything further? 18 MR. DUCKER: Not from me. 19 MR. MOORE: And null is what it says. It isn't 20 a prediction at all. 21 JUDGE BHATTACHARYYA: Okay. Are we ready to go 22 to the next term or did you -- 23 MR. DUCKER: I am unless you want to take a 24 break. 25 JUDGE BHATTACHARYYA: Let's take a break now for

Page 50 1 15 minutes. 2 (Recess.) 3 JUDGE BHATTACHARYYA: Please be seated. 4 MR. DUCKER: So we're now going to turn to the 5 next term, term 3. And while the parties have grouped this 6 as a single term, the dispute is really over what it is one 7 term or two different terms. 8 Is inter-intra encoded, does that mean the same 9 thing as intra-inter coded block. 10 Respondents argue that this is a single term, 11 but it's actually two distinct terms. The first term, 12 intra-inter coded -- I'm sorry, encoded block is used in 13 claims 1 and 13, the second term intra-inter coded block, 14 admittedly it is somewhat confusing, is used in claims 9, 15 11, and 15. 16 They're different terms used in different 17 claims. And I'll explain why they should not all be given 18 the same meaning and that they should have their plain and 19 ordinary meaning, which would be understood to the person 20 of skill in the art. 21 So turning to slide 38. So here I just have an 22 example of two of the claims, claim 1 and claim 9, which 23 use the two terms. These are each independent claims, but 24 they use different words. 25 As we saw with respect to intra-inter hybrid	Page 52 1 So how do we know that this is correct. The 2 claims and the specification tell us it's correct. 3 JUDGE BHATTACHARYYA: Before you go on, could 4 you explain to me what the relationship is between the 5 decoder and the combining unit? 6 MR. DUCKER: So the decoder is everything you 7 see on figure 8, and the combining unit, which I'll get 8 into some more details, is combining the intra frame 9 prediction with the motion compensation prediction, into a 10 I'll call it a hybrid prediction that gets output to the 11 summer in between 822 and 840, the scaling inverse 12 transform, and the deblocking filter. 13 JUDGE BHATTACHARYYA: Is it a component of the 14 decoder? 15 MR. DUCKER: It is a component of the decoder. 16 JUDGE BHATTACHARYYA: Thank you. 17 MR. DUCKER: Probably should have just done that 18 right from the start. 19 So the Federal Circuit has explained, so I'm on 20 claim -- slide 40, that the claims themselves provide 21 substantial guidance as to the meaning of particular claim 22 terms. And actually liked what counsel for respondent said 23 earlier, that claims are likely the best guide as to what 24 claim terms mean. 25 So here I will point to claim 15. And claim 15
Page 51 1 coding, when you use different words in different claims, 2 they are presumed to have a different meaning. And the 3 claims are presumed to have differing scope. 4 Again, the applicants knew the word "encoded 5 block, hybrid intra-inter encoded block, and if they wanted 6 to use that term, they could have used it in the other 7 claims, but they chose to use a different term, hybrid 8 intra-inter coded block. 9 Under Respondents' construction, these terms 10 have the exact same meaning, despite their different uses 11 in different claims. And in some of the claims, 12 Respondents' construction ends up making the claim 13 nonsensical. It turns a decoder claim into an encoder 14 claim, which simply makes no sense, and no person of skill 15 in the art would understand the claims to be so limited. 16 So turning to slide 39, in the context of these 17 claims and this specification, the hybrid intra-inter 18 encoded block is the input to the decoder. So up here I 19 have it marked in red. 20 Whereas the hybrid intra-inter coded block is 21 the output of the combining unit 827. 22 So figure 8 is a preferred embodiment of the 23 decoder that is claimed in this patent, and I'm showing 24 where the hybrid intra-inter encoded block is and where the 25 hybrid intra-inter coded block is.	Page 53 1 is directed to a video decoder for decoding blocks within 2 frames of a sequence of two-dimensional images. So that is 3 what we see in figure 8, that's a preferred embodiment of 4 this claimed decoder. 5 The decoder includes an intra frame prediction 6 block, that's 826, and I have some other images later which 7 will highlight this better, but the intra frame prediction 8 block 826 which outputs a first intra prediction into the 9 combining unit 827. 10 This decoder also includes an inter frame 11 prediction block, which is 830, the motion compensation. 12 In the specification that is specifically identified as the 13 inter prediction block. And that outputs a first inter 14 prediction into the combining unit. 15 Now, the key for this claim is the end. 16 "Wherein the combining unit is adapted to combine the first 17 intra prediction and the first inter prediction and to 18 output a hybrid intra-inter coded block." 19 So you can see the orange dot, that is the 20 output of the combining unit. That is what the claim calls 21 the hybrid intra-inter coded block. But under Respondents' 22 construction, the red dot is actually what the combining 23 unit would have to output. 24 It makes -- so it's nonsensical. You wouldn't 25 have an encoded block go through all of the other processes

Page 54 1 in the decoder, entropy, decoding, scaling, inverse 2 transformation, then go down into frame prediction and 3 basically reverse everything you had done before, go 4 through intra frame prediction and inter frame prediction 5 into the combining unit, and come out with exactly what 6 initially came into the decoder. That just doesn't make 7 sense. 8 And the terms are not used interchangeably. 9 Here the claim specifically says the output of the 10 combining unit is the intra-inter -- hybrid intra-inter 11 coded block. 12 So the claims are an excellent guide as to what 13 these terms mean. But claim 15 is not the only claim that 14 helps determine this. 15 So claim 9. Claim 9 is very similar to claim 16 15. It has all the same subelements. But then in claim 17 11, it talks about "the hybrid intra-inter coded block is 18 the average of the first intra prediction and the first 19 inter prediction." 20 On slide 41 in the bottom left, I have what's 21 shown here is figure 9B. Figure 9B is an embodiment of the 22 combining unit 827 that we saw on figure 8 that performs 23 the averages. 24 So again, the claims are telling us that the 25 hybrid intra-inter coded block is the output of the	Page 56 1 encoder, and that is the hybrid intra-inter encoded block. 2 There is also no lexicography that would require 3 adopting Complainant's construction -- I'm sorry, 4 Respondents' construction. I don't think they contend 5 otherwise, but nothing in the prosecution history provides 6 a special definition of the terms intra-inter encoded block 7 or intra-inter coded block. 8 And on slide 48, there's also no disclaimer. 9 There is no place where they import Respondents' 10 construction, a compressed representation of a current 11 block obtained using a prediction that is a combination of 12 an inter prediction and an intra prediction. Nowhere is 13 that used in the prosecution history to overcome any prior 14 art. 15 Unless you have any questions, I'm going to pass 16 it to Respondents. 17 JUDGE BHATTACHARYA: No questions at this time. 18 Thank you. 19 MR. MOORE: Okay. Intra-inter encoded coded 20 block. 21 Now, again, the Complainants offer us nothing 22 here other than plain and ordinary meaning. Don't tell us 23 what that means, don't even point to what that could mean. 24 But they offered plain and ordinary meaning. 25 The Respondents and the intervenor want a
Page 55 1 combining unit, not the input to the decoder. 2 The specification is consistent. The 3 specification talks about the intra frame prediction block 4 826 that's coupled to a first input of the combining unit 5 827. And it talks about a motion compensation inter 6 prediction block 830, which is also coupled to the second 7 input of the combining unit 827. 8 So those two predictions come out, they go into 9 the combining unit. 10 The decoder combining unit 827, it works similar 11 to the one in the encoder, but it combines the first intra 12 prediction from the intra frame prediction block with a 13 second inter prediction from the motion compensation inter 14 prediction frame block and outputs a combined hybrid 15 intra-inter prediction. 16 The output there, that is the hybrid intra-inter 17 prediction block, coded block, excuse me, a hybrid 18 intra-inter coded block. And that is slide 44. 19 The specification also explains what the hybrid 20 intra-inter encoded block is. It is the input to the 21 decoder. So the video decoder receives and decodes a data 22 stream that may contain a block/macroblock, encoded, here 23 they use the word encoded, "in accordance with the hybrid 24 intra-inter bi-predictive encoding mode." 25 This is the output of the decoder, goes into the	Page 57 1 further definition of what that plain and ordinary meaning 2 is, and that's a compressed representation of a current 3 block obtained using a prediction that is a combination of 4 intra and inter prediction. 5 Claim 13 expressly identifies what the decoder 6 receives and decodes. 7 "A video decoder is adapted to decode a bit 8 stream including a bi-predictive intra-inter encoded 9 blocks." 10 The construction must explain the phrase where 11 the claim places the block into the bitstream. 12 Now, what's important here is compressed video 13 is what goes into the bitstream, so when we say it's part 14 of a compressed stream, a compressed block, it's because 15 that's coming from the bitstream. 16 If you remember in the tutorial, you were shown 17 an encoder and a bitstream and then a decoder and a 18 television. 19 The content of that bitstream is compressed, 20 it's compressed blocks. Again here, figure 6, the encoder 21 compresses and encodes the image data, the transmitter 22 sends the resulting bitstream to the decoder, the bitstream 23 contains a hybrid encoded macro blocks. 24 Again, the compressed representation identifies 25 the coded data that the decoder receives. They try to make

Page 58 1 a distinction between encoded and coded by pointing to the 2 specific figure 8. And I believe the argument is what 3 comes in on the bitstream to the left into 810 is encoded, 4 where the output of the combining unit they say is the 5 coded stream or the coded block. 6 And in a lot of ways, that's nonsensical in some 7 of the claims that we'll look at later. The input 8 bitstream reaches the entropy encoder 810 and the combining 9 unit 827 supplies a prediction to that summing block. 10 Again, remember the predictions are used so we 11 don't have to carry the full data in the stream. The 12 output -- output a resulting combined hybrid intra 13 prediction to the second input of the summing block. 14 What's coming out of that combining unit is the 15 combined prediction. 16 In claim 11, the video decoder of 9, wherein the 17 hybrid intra-inter coded block is the average of the first 18 intra prediction and the second inter prediction. 19 In claim 15, and it's the final limitation, 20 "wherein the combining unit is adapted to combine the first 21 intra prediction and the first inter prediction and to 22 output a hybrid intra-inter coded block." 23 The Complainants use these clauses to treat 24 coded block as the prediction. That reading must also 25 account for claim 13 and the specification.	Page 60 1 respectfully argue that claim 13 is allowable as well. 2 The examiner stated the reason for allowance, 3 combining a first prediction with a second prediction, 4 where the first prediction is intra and second is inter, as 5 recited in all claims. 6 Accordingly, the predictions from which the 7 block were obtained are intra and inter is consistent. 8 So the plain and ordinary meaning we believe 9 needs further combination, and that's a compressed 10 representation of a current block obtained by using a 11 prediction that is a combination of inter and intra 12 prediction. 13 Coded identifies the compressed representation. 14 Intra and inter identifies the combined prediction. Claim 15 13 and the specification support both parts of the 16 construction. 17 So I wanted to bring up the patent for just a 18 moment. I do apologize. Thank you. 19 Do you have questions? 20 JUDGE BHATTACHARYYA: Yes. Would you mind going 21 back to the figure with the combiner in it? 22 MR. MOORE: Sure. I don't know that I can. 23 Give me a moment. Is it this figure? 24 JUDGE BHATTACHARYYA: No, the other one that 25 has --
Page 59 1 In claim 13 and the specification they identify 2 encoded blocks in the bitstream. Claim 11 and 15 don't 3 justify giving coded block any different meaning. 4 The claims remain as they were written. The 5 construction identifies where the block is. Any 6 inconsistency in the way that the claim uses that term 7 remains a separate question. 8 Validity doesn't supply any different 9 definitions, so validity preservation canon only applies to 10 the terms -- if the terms remain ambiguous after applying 11 the available construction tools. 12 So claim 2 permits combining the first 13 prediction and the second prediction and a third prediction 14 of the current block. The construction specifies the 15 prediction types, without fixing a formula or limiting the 16 total to two. 17 In the office action response of July 1, the 18 applicant told the examiner that every independent claim, 19 including 13, combines intra and inter prediction. 20 Give me a moment. 21 At the onset we note the independent claim 13 is 22 similar to previously argued 1, 19, 15 and 19, in that all 23 such claims involve encoding by combining an intra 24 prediction and an inter prediction. Accordingly, that's 25 the same references we cited against all these claims. We	Page 61 1 MR. MOORE: Figure 8 from the patent? 2 JUDGE BHATTACHARYYA: I think so. Great. Thank 3 you. 4 All right. So I believe Complainant's counsel 5 indicated that they have a view of a difference in meaning 6 between intra-inter encoded block and intra-inter coded 7 block. 8 MR. MOORE: Yes. 9 JUDGE BHATTACHARYYA: Do you remember that? So 10 do you -- is it your position that those two terms mean the 11 same thing? 12 MR. MOORE: They do. And -- 13 JUDGE BHATTACHARYYA: And then so what does that 14 correspond to in this figure? 15 MR. MOORE: The input bitstream. 16 JUDGE BHATTACHARYYA: The input bitstream, all 17 right. So -- 18 MR. MOORE: There is a lot of processing. 19 There are claims in the patent that require the 20 coded block to be decoded to form an image. That would be 21 completely nonsensical if the coded block were merely the 22 input to the summer. 23 JUDGE BHATTACHARYYA: Okay. 24 MR. MOORE: It wouldn't have the entropy 25 decoding, it wouldn't have dequantization, it wouldn't have

Page 62 1 any of the process of taking a compressed representation of 2 an image and forming an image. 3 JUDGE BHATTACHARYYA: So the N doesn't make a 4 difference and the phrase refers to the input to the 5 decoder? That's Respondents' position? 6 MR. MOORE: Right. The coded-encoded would be 7 the bitstream going into the entropy encoder. 8 JUDGE BHATTACHARYYA: All right. And -- that's 9 fine, thank you. I have a follow-up question for 10 Complainants, and I know you have further points to make. 11 MR. DUCKER: If you would like to start with 12 your question, I'm happy to start there. 13 JUDGE BHATTACHARYYA: Yes. So I understand the 14 distinction that you're making between encoded block and 15 coded block, and it has to do with where in this figure 16 it's located. 17 But is there any other issue with the proposed 18 construction by Respondents that you disagree with? They 19 have a construction, compressed representation of a current 20 block obtained using a prediction that is a combination of 21 an inter prediction and an intra prediction. 22 As long as the location of this block is as you 23 propose, do you have any other disputes with this 24 definition? 25 MR. DUCKER: Yes.	Page 64 1 Respondents? 2 MR. DUCKER: It is a prediction, yes. What 3 comes out of the combining unit is a prediction that 4 combines an inter prediction and an intra prediction. 5 JUDGE BHATTACHARYYA: Okay. So the only part of 6 this you disagree with is the compressed representation 7 part? 8 MR. DUCKER: Yeah, of a current block. 9 JUDGE BHATTACHARYYA: All right. And then in 10 terms of the distinction you make between what's going into 11 the decoder versus what's coming out of the combining unit, 12 that doesn't seem to be in your proposed construction. How 13 are we supposed to know that's in there? Is that -- you 14 say plain and ordinary. Do all decoders have a combining 15 unit? 16 MR. DUCKER: So I think it's not necessary 17 because of the claims themselves. And let me go to -- it's 18 claim 15, which is slide 40. 19 So claim 14 here tells you what it is. It says 20 "wherein the combining unit is adapted to combine the first 21 intra prediction and the first inter prediction and to 22 output a hybrid intra-inter coded block." 23 So it tells you exactly where that's happening. 24 You don't need to put in a location for the claim to make 25 sense.
Page 63 1 JUDGE BHATTACHARYYA: Okay. 2 MR. DUCKER: So I'll go back to figure 8 here. 3 The words "compressed representation," as he said, that is 4 what gets output by the encoder and sent to the decoder. 5 And in here, that is specifically this hybrid intra-inter 6 encoded block. 7 But after it's received, it undergoes entropy 8 decoding, undergoes all sorts of processes, it's no longer 9 exactly the compressed representation. 10 And, in fact, the intra frame prediction here 11 and inter frame prediction here are combining two 12 predictions, and so it's really just a combination of 13 predictions that have been coded together and output by the 14 combining unit. 15 JUDGE BHATTACHARYYA: So it's not compressed 16 anymore? It's -- 17 MR. DUCKER: It's not compressed exactly like it 18 was when it came out of the encoder. It hasn't been fully 19 decompressed yet because there's still a couple other -- 20 the deblocking filter has to fix some of the errors and 21 things like that, but it is no longer the same compressed 22 representation. 23 JUDGE BHATTACHARYYA: Okay. And is it still a 24 combination of an inter prediction and intra prediction as 25 in the second part of the proposed construction from	Page 65 1 Now, under Respondents' construction, this claim 2 doesn't make any sense because they're saying that the red 3 dot is actually what the combiner outputs. But the 4 combiner does not output the red block. The red block is 5 what came from the decoder. 6 JUDGE BHATTACHARYYA: All right. Are there 7 other claims where the term "intra-inter coded block" are 8 used that don't include a combiner? 9 MR. DUCKER: No. I think all of them -- yeah, 10 not for coded, sorry. Not for coded. 11 JUDGE BHATTACHARYYA: Thank you. Those were my 12 questions. If you have any other points you wanted to make 13 in response, please proceed. 14 MR. DUCKER: No, no. That's it. Thank you. 15 MR. MOORE: Just one more comment. 16 So one of the problems with this figure 8 and 17 the output of the combining unit being the coded block 18 versus the encoded block, as we look at claim 9, the coded 19 block has to be able to produce an image all on its own 20 through this decoder. That would make no sense. 21 Claim 1 they call it encoded. Claim 9 they call 22 it coded. But they're talking about a decoder that takes 23 in a compressed stream and produces images, video. 24 That's why we say it's a block out of the 25 compressed stream coming into 810 in the decoder.

Page 66 1 Otherwise, claim 9 has a problem. How is this coded block 2 of just predictions going to become a video? 3 JUDGE BHATTACHARYYA: Okay. Could you respond 4 to the argument about claim 15 not making sense under your 5 approach? 6 MR. MOORE: Well, I think claim 15 has problems 7 also. We're on the side that says everything is invalid. 8 I do apologize. 9 Yes, I mean claim 15 does say that the 10 prediction -- the output of the combination is used in 11 forming that stream, and it is. It is also a block that is 12 encoded. In the process of compression, you take your raw 13 data, you do some math, usually a discrete cosine 14 transform, that gives you a bunch of values. You compress 15 those values by quantization, and then you encode that into 16 data. 17 That encoding is what forms your blocks of data. 18 So it gets over to the other side, and you have to re-undo 19 that process. And the predictions come along with it, and 20 those predictions are used in the decoding process. 21 But coded and encoded mean the same thing. 22 JUDGE BHATTACHARYYA: All right. Thank you. 23 Could I hear from Complainants on claim 9? 24 MR. DUCKER: Yes, that's exactly what I wanted 25 to address. Actually, can I have your slide, please?	Page 68 1 talking about the bitstream. Claim 9 does not mention the 2 bitstream when it talks about intra-inter coded. 3 JUDGE BHATTACHARYYA: Okay. Thank you. 4 Anything further or are we ready for the next 5 term? 6 MR. STEVENS: I think we're ready for the next 7 term, your Honor. My colleague Dr. Tsui is going to handle 8 this term too. Oh, I'm sorry. Excuse me. Apparently I'm 9 having trouble with odd and even numbers today. It's their 10 turn to go first. 11 JUDGE BHATTACHARYYA: All right. 12 MR. LIN: It's not on the big screen. 13 JUDGE BHATTACHARYYA: That's fine. I'll be able 14 to follow it. 15 MR. LIN: Your Honor, my name is James Lin. I 16 represent the Hisense Respondents. I have a copy of my 17 presentation. May I approach? 18 JUDGE BHATTACHARYYA: Yes. 19 MR. LIN: So, your Honor, I'm going to address 20 the '784 patent regarding the selection terms. 21 Your Honor, the parties do not dispute what 22 select means. The dispute is when the region-based filter 23 parameter must be selected. 24 Respondents' construction resolves the issue. 25 The parameter must be selected for the region before the
Page 67 1 So claim 9 says it's -- this is the preamble, by 2 the way. "A video decoder adapted to decode a hybrid 3 intra-inter coded block and to provide" reconstructed 4 "pixel data." 5 So it's the decoder. We're not talking 6 specifically -- this is all of figure 8, does this, not 7 just the combining unit. 8 Here because you have an intra frame prediction 9 block being operatively connected to a combining unit for 10 outputting a first intra prediction, and an inter frame 11 prediction block being operatively connected to the 12 combining unit for outputting a first inter prediction of 13 the block, that's -- once it's combined, that is the hybrid 14 intra-inter coded block. And then it is put into a 15 summer -- I can put up figure 8 again. But it's put into a 16 summer, goes through some additional processing, and it 17 outputs a final image, a decoded image. 18 I'm not sure why Respondents believe -- this 19 doesn't say a video decoder receives a hybrid intra-inter 20 coded block. Actually, if you look at claim 13, that's 21 exactly what claim 13 says. It's very small. 22 So 13 says "a video decoder adapted to decode a 23 bit stream including bi-predictive intra-inter" encoded 24 "blocks." 25 Here again we go back to encoded and it's	Page 69 1 filtering process for the region begins. The key federal 2 authority is Sound View. It confirms that claim language 3 can impose temporal order when grammar and -- make it a 4 linear operation depending on a completed status created by 5 earlier operation. That is what the '784 claims too. The 6 filtering is performed using a parameter selected for the 7 region. The specification and the prosecution history 8 cover the same sequence. 9 Sound View is the centerpiece involved in claim 10 16 of the '213 patent and where it refers to these steps 11 have to occur in the order written. 12 Claim 16 first require receiving a request for 13 an SM object, and then require allocating a buffer to cache 14 the requested SM object. The Federal Circuit held that the 15 first two steps had to perform in that sequence. 16 The critical point was not an express word such 17 as "before." The Federal Circuit held that requested did 18 more than serve as a grammatical descriptor, because it 19 reflected a status created by the earlier receipt of the 20 request. Sound View explains that the claim's grammar and 21 logic supplied the required ordering. Under Sound View the 22 rule is dependency-based. The sequence follows when the 23 later limitation logically depends on a result, object, or 24 status produced by the earlier limitation. 25 Sound View asks what must already be true for

Page 70 1 the later claimed operation to be performed as the claim 2 describes it. 3 Sound View is consistent with a long line of 4 Federal Circuit authority. In Loral Fairchild, the court 5 required the insulation layer to be formed before ion 6 implantation because the later implantation step aligns the 7 barrier region with the already-formed layer. 8 In Mantech, the court required the claim 9 sequence because each later step used or depended on the 10 result of an earlier step. 11 In E-pass, the court held that the steps had to 12 occur in order because the later steps referred to the 13 completed result of the prior steps. Interactive Gift 14 Express and Mformation applied this same principal -- the 15 claim's grammar or logic makes an earlier step a necessary 16 predicate for a later operation, the claim requires the 17 order even without the word before. 18 The common -- is functional dependency. A later 19 operation cannot use a completed result or status if that 20 result or status already exists. 21 The same thing appears in the '784 patent. The 22 claim filtering operation uses a parameter that has been 23 selected for the region. The selected for the region 24 status therefore must exist when the filtering operation 25 begins.	Page 72 1 universal temporal rule in every patent. Here using 2 operates together with the past participle selected in the 3 specific claimed relationship between the parameter and 4 filtering operation. 5 The claim does not merely require parameters 6 that would be selected. It requires filter using a 7 parameter selected for the region. 8 The specification describes figure 4 as an 9 exemplary method for region-based filter parameter 10 selection for filtering in a video decoder. 11 Function block 425 sets the filter parameters. 12 Only thereafter does function block 430 perform the 13 filtering operation. 14 Figure 4 is corroborative, not the sole basis 15 for our construction. The claim language supplies the 16 temporal relationship. The specification shows the 17 disclosed process operating in the same way. 18 The relevant boundary is the beginning of the 19 claim filtering process for the region. The construction 20 should not allow -- should not allow accused implementation 21 to redefine the boundary by dividing the filtering process 22 into multiple internal software routines and labeling a 23 later routine as the filter. 24 The patent supplies an objective process level 25 distinction in figure 4. Parameter setting at block 425,
Page 71 1 The Federal Circuit request analysis maps onto 2 the claim's use of selected. Requested described if an 3 already has required a particular status. Selected 4 likewise describes a parameter that has already acquired 5 the claim status of being selected for a region. 6 The point is not the word selected universally 7 imposes chronological order in every context. The point is 8 that in these terms, the later filtering operation is 9 expressly performed using the parameter selected for the 10 region status. 11 The question is therefore whether the parameter 12 remains unselected until after the claim filtering process 13 has begun. Respondents' answer is no. 14 So we know claim 9 and 13 -- asserted claim 9 15 and 13 are apparatus claims and claim 15 is a method claim. 16 And we know Complainants view is Sound View only applies to 17 method claims. For claim 9 and 13, the same claim language 18 dependency enforces the meaning of the recited function of 19 relationship. The construction is not based on a generic 20 message that order rule. 21 The filtering operation must be performed using 22 a region-based filter parameter selected for the region. 23 The claim therefore identifies the parameter by status that 24 exists where the filtering operation uses it. 25 Respondents are not arguing that using imposes	Page 73 1 followed by filtering at block 413. The construction does 2 not regulate on related decoding computations. Every 3 parameter in the decoder or every option might occur 4 somewhere in larger process. 5 The temporal boundary follows the claim 6 filtering process, not accused implementation's choice of 7 software labels. 8 The applicants initially amended the claims to 9 require adaptation based on statistics of the counting of 10 the region. The examiner observed that this formulation 11 could still be interpreted in multiple ways and contrasted 12 with the specification's disclosure of local variance 13 before the filtering. 14 On October 29, 2015, applicants amended the 15 independent claims to require that the region-based filter 16 parameter be adapted before filtering. Applicants rely on 17 that limitation to distinguish the prior art. 18 The notice of allowance identifies the same 19 temporal distinction as a reason for allowance. The 20 prosecution history expressly established adaptation before 21 filtering, would rely on the claim language in Sound View 22 for the temporal relationship causing parameter selected 23 for the region. The prosecution history in figure 4 only 24 corroborate that reading. 25 The Complainants argue that prosecution

Page 74 1 established only for adapted, not selected. Luminara 2 requires a clear and unmistakable disclaimer. Respondents, 3 however, do not need prosecution disclaimer to create a 4 temporal requirement. 5 The primary basis is the claim language read as 6 a whole, using the dependency logic recognized in Sound 7 View and other Federal Circuit cases. 8 The specification and prosecution history only 9 corroborate the same reading. Luminara addresses 10 disclaimer. Our construction does not depend on disclaimer 11 to create the requirement. So the absence of a clear and 12 unmistakable disclaimer does not resolve the claim language 13 issue in Complainant's favor. 14 The parties agree that select has a plain 15 meaning. They disagree about the claim scope. May the 16 parameter first be selected for the region after the claim 17 filtering process has begun. 18 Complainant's plain meaning proposal does not 19 answer that question. O2 Micro requires the ALJ to resolve 20 the fundamental dispute over the scope of a claim term 21 rather than simply announcing plain meaning. 22 Respondents' construction makes explicit the 23 temporal relationship here in the claim context, without 24 redefining select generally. 25 We do not contend that selection and adaptation	Page 76 1 region means plain meaning that is using a filter parameter 2 that has been selected for the region before filtering of 3 that region begins. 4 The claim requires filtering using a parameter 5 selected for the region. Sound View confirms that claim 6 grammar and logic impose temporal order when the operation 7 depends on completing a status created by an earlier act. 8 Even we saw in expressed word before. 9 Here selected supplies the completed status, 10 while the CIPRA adaptation limitation reinforces the 11 sequence we saw conflating selection and adaptation. 12 Figure 4 in the prosecution history corroborate 13 the relationship between establishing the applicable 14 parameter in a subsequent claim filtering. Complainant's 15 plain meaning proposal leaves the actual claim scope 16 unresolved, so ultimately requires your Honor to resolve 17 it. Thank you. 18 Do you have any questions? 19 JUDGE BHATTACHARYYA: Not at this time, thank 20 you. 21 MR. STEVENS: My colleague Mr. Ligotti is going 22 to handle this term, your Honor. 23 MR. LIGOTTI: Good morning, your Honor. Could I 24 get that document camera, please? 25 So, your Honor, I'd like to just start with the
Page 75 1 must be separate sequential operations in every embodiment. 2 The specification recognizes adaptation as one form of 3 region-based parameter selection. 4 The point is simply whatever mechanism 5 established the region-based parameter, the filtering must 6 use a parameter like is selected for the region. 7 We are not moving the word before grammatically. 8 We are giving effect to the language that the filtering use 9 of parameter already selected for the region. 10 We are not moving the word "before" from 11 "adapts" to "selected." We are giving effect to the 12 requirement that filtering use a parameter selected for the 13 region. 14 Adaptation may itself be the mechanism by which 15 the region-based parameter is established. The point is 16 narrower. When the claimed filtering operation uses the 17 parameter, that parameter must already have the selected 18 for the region status. 19 Sound View shows why the relationship can rest 20 on the claims and logic without adding the word before the 21 claim. This response directed to Complainant's argument 22 that Respondents are improperly importing additional 23 temporal limitation. 24 So, your Honor, we respectfully request that our 25 proposed construction select/selecting/selected for the	Page 77 1 last slide we just saw from Respondents. Their 2 construction is about adding this term "when filtering 3 begins" to modify when the selection of the parameter 4 occurs. 5 But as we saw in their rebuttal brief and now 6 again their presentation, it seems to be retracting a bit. 7 It's about when the parameter is used by the filter. 8 So as we see these two snippets here, selected 9 for the region describes the status of the parameter when 10 it's used for filtering. When the filter actually modifies 11 pixels. Has the parameter been selected and has it been 12 adapted. That's what the claim addresses. 13 But it has no requirement, the claim has no 14 requirement that the selection occur before or during 15 filtering, all these different lines that are being drawn. 16 That's not supported by the claim, it's not supported by 17 the specification. And that's the reason why we see 18 Respondents walking back to this idea of when -- if there 19 is a temporal requirement here, it's when the parameter is 20 used for filtering. 21 Now, let me back up a little bit, if I could get 22 the slides -- 23 JUDGE BHATTACHARYYA: Sorry, so what's the 24 distinction? You're saying they're talking about being 25 used for filtering. What's the alternative that you

Page 78 1 believe they proposed earlier or that they have suggested 2 earlier? 3 MR. LIGOTTI: The proposed construction was that 4 the region-based filter parameter has been selected before 5 the artifact filtering for that region begins. 6 So they're putting this word "begins" into the 7 construction to move the entire temporal timeline up, to 8 say that certain things recited in the claim must occur 9 before filtering begins. The entire filtering process. 10 There were slides addressing how certain filters 11 may be constructed, may cause problems, that's not what the 12 claim says. 13 The claim says that the filter uses a 14 region-based filter parameter that -- selected for the 15 region. That can happen at any point up until the point 16 where the filter actually uses that parameter to filter the 17 pixels. 18 JUDGE BHATTACHARYYA: Okay. So you don't 19 disagree that there is a temporal requirement. It's just 20 you say it's before use as opposed to before the filtering 21 process begins? Is that -- 22 MR. LIGOTTI: Yes, your Honor. The claim itself 23 does not require a temporal component on selected. But 24 we're not arguing against the commonsense understanding 25 that for a filter to use a parameter that's been selected	Page 80 1 coding group. 2 Filters are used here in the process in the 3 coding loop to remove noise or artifacts that results from 4 compressing the bitstream, so unwanted parts of the visual 5 image of the frame that can be cleaned up by these filters. 6 So what the filter is actually doing is it goes 7 and it modifies individual pixels to remove or reduce that 8 noise. And that is the point in which the filter is 9 actually filtering. 10 Filters themselves do have other processing 11 components, operations, that are used to create, modify, 12 select, adapt, parameters that are then ultimately used in 13 the filtering itself. 14 But it's that point where the filter modifies 15 the pixel that the filtering occurs. 16 And I mentioned that this deartifacting filter 17 shown in figure 2 is within the coding loop. And you can 18 see there that there's two outputs from the deartifacting 19 filter. One goes down and to the left back into the 20 referenced picture buffer, and the other goes out. 21 And the reason why this is an in loop or decoder 22 having a deartifacting filter is that it is taking the 23 output of the filter, the filtered product, and it's 24 putting it back into the coding loop, back into the 25 reference picture buffer, to be used for further
Page 79 1 to do the filtering at the time it actually modifies those 2 pixels, so at the time it actually filters, well, then, 3 yes, it has to have been selected beforehand. 4 That is that a fair reading of this claim would 5 suggest. And then there is another limitation, adapts, so 6 that the decoder adapts the parameter. That does say 7 before the artifact filtering, so there's a temporal 8 limitation there. 9 But again, that's not a requirement that that 10 adaptation happened before the filtering process starts. 11 It's a requirement that the parameter be adapted before the 12 filter modifies the pixels using that adapted parameter. 13 In the claim, when there is a temporal 14 requirement, it is not so early as Respondents suggest. 15 And in the claim when there is no temporal requirement and 16 they're seeking to add one, it's not -- even a commonsense 17 understanding of the claim would not put the temporal 18 requirement so early in time to require that the selection 19 happen before filtering begins. 20 If I could switch over to the Complainant. 21 Complainant 2, okay, thank you. 22 A bit of background here on filtering I think 23 might be helpful. So shown here on the screen is an 24 exemplar embodiment, figure 2 of a decoder, and highlighted 25 in yellow is the decoder's deartifacting filter within the	Page 81 1 predictions and used for further reconstructions for future 2 decoded frames or other decoded frames. 3 It's also outputting it to the user. So you get 4 two benefits here. Cleaned-up image to be used for future 5 frames, as well as a better image to be used -- to be shown 6 to the user. 7 And so the '784 patent explains that because 8 video content varies, both spatially and temporally, the 9 noise or artifacts in the video sequence under the same 10 quantization parameter or coding mode can be very 11 different. This in turn calls for different filtering 12 parameters. 13 So at the time the filter modifies the pixel, 14 what the '784 patent is telling us is in the prior art 15 there were problems where those parameters were not adapted 16 to the video content or they were not matching the video 17 content, and so there was a mismatch. And you didn't get 18 optimal or good filtering. 19 As an example, to skip ahead here, the '784 20 patent in the background describes one example of one of 21 these filters, a deblocking filter. And the '784 patent 22 explains that the deblocking filter addresses coarse 23 quantization of the transform coefficients and the use of 24 different reference locations or different reference 25 pictures by neighboring blocks in motion-compensated

Page 82 1 prediction, and it can give rise to these visually 2 disturbing artifacts such as distortion around edges, 3 textures or blocks. 4 The '784 patent says that was known to have 5 these deblocking filters to clean up these blocking 6 artifacts. 7 But the blocking artifacts aren't the only form 8 found in video. The '784 explains there's other artifacts, 9 such as ringing, edge distortion or texture corruption. 10 And the '784 patent explains that the deblocking filter as 11 known in the art can't reduce those artifacts and can't 12 reduce artifacts caused by quantization errors inside the 13 block, and the techniques used for the deblocking filter 14 are not suited for processing image singularity such as 15 edges or textures. 16 Here are some examples of what these different 17 forms of noise and artifacts look like. We've got blocking 18 on the upper left, and you get those little blocks that 19 match the 8-by-8 block as it's being decoded. And then 20 ringing artifacts on the right, you get these halos around 21 the edges of images in the frames, and it can cause 22 distortion known as ringing artifacts. 23 There's edge distortion in the lower left of 24 slide 55, where there's warped edges and stepped images, 25 and there's color fringe issues. And there's texture	Page 84 1 or not -- this is before in time when the filter is 2 actually modifying the pixels, selection had to have 3 occurred beforehand. 4 And so there's three issues with this proposed 5 construction. For one, it departs from the plain meaning 6 of the claim terms which I already touched on a little bit, 7 so I'll move through that quickly, but it also adds a 8 temporal limitation to require that the filtering selection 9 for region be before de-artifact filtering of that region 10 begins. 11 And the premise for that is based on improperly 12 conflating claim elements, conflating the selected term, 13 which has no temporal limitation, with the adapts term, 14 which refers to adapt -- the decoder adapting the parameter 15 before de-artifact filtering. 16 So first the plain meaning, as we've heard 17 multiple times today, absent lexicography or disavowal, 18 there is no reason to depart from the plain meaning of the 19 claims. And in order to do that using lexicography or 20 disavowal, it would have to be exacting and disavowal would 21 have clear and unmistakable, and we don't have anything of 22 the sort. 23 Just jumping ahead to the prosecution history, 24 arguments that we did hear, again those concern the adapts 25 term, not the selected term, but nothing of the level of
Page 83 1 corruption shown in the bottom right where fine details 2 smear away into false pattern. 3 In each of these examples, when a filter is 4 applied to what is shown on the right side, the side with 5 noise, it's actually exchanging the pixel values itself 6 from what you see to a filtered version that looks 7 different. 8 It's that point in time when the parameters 9 governing the way the filter operates must have been 10 selected and adapted. And so that brings us back to the 11 claim language. 12 Jump ahead to the claim language here. 13 Claim 9, which is an apparatus claim, states 14 that the decoder comprises a de-artifact filter for 15 performing de-artifact filtering on the region using at 16 least a region-based filter parameter selected for the 17 region. And that's -- the highlighted term "selected for 18 the region" is the disputed term we're here to talk about 19 today. 20 And Respondents want to add a limitation in to 21 say that that must be -- must have been selected before 22 de-artifact filtering of that region begins. 23 And so they are seeking to move up the timeline 24 to say that before the de-artifact filtering process 25 begins, before any operation of the filter begins, whether	Page 85 1 clear and unmistakable disclaimer that would require 2 adjusting the temporal limitations to before de-artifact 3 filtering begins. 4 As the Federal Circuit has explained in Phillips 5 shown at the top of the slide, the claims themselves 6 provide substantial guidance as to the meaning of the claim 7 terms, and they can be highly instructive. So let's look 8 at the claims themselves, which does not have the term 9 "begins," doesn't have that term anywhere in the claim. 10 It states that the decoder that comprises a 11 deartifact filter for performing de-artifact filtering on 12 the region using the parameter selected for the region. 13 That's why I started with respondent's slide. 14 It's about the use of the parameter by the filter. It's 15 about that time in which the filter actually modifies the 16 pixel. That's the time, if there's any time to be read 17 into this claim, that's the time that controls when the 18 parameter must have been selected, and that's the time in 19 which -- which controls when the decoder must have adapted 20 the parameter, in order to have the parameter for filtering 21 at that moment when you modify the pixels, it's got to have 22 been selected and adapted before, in the context of this 23 claim. 24 So again, to the extent there's any temporal 25 limitation on selected, it's under that context. It is not

Page 86 1 requiring that this is occurring before any filtering 2 operation begins. 3 JUDGE BHATTACHARYYA: With respect to the adapt, 4 could you move back to that slide? 5 MR. LIGOTTI: Sure. 6 JUDGE BHATTACHARYYA: So you would agree that 7 the adaptation occurs before de-artifact filtering begins; 8 is that right? That you believe the adapts language in the 9 next phrase occurs before de-artifact filtering begins? 10 MR. LIGOTTI: The claim certainly requires that 11 the decoder adapts the region-based filter parameter before 12 de-artifact filtering. 13 JUDGE BHATTACHARYYA: Okay. 14 MR. LIGOTTI: Your question about whether that 15 would mean begins. If it's referring to the moment in 16 which the filtering is modifying the pixels, being applied 17 to the pixels, then, yes, the decoder must have adapted the 18 region-based filter parameter before de-artifact filtering 19 of those pixels. It's at the moment when the filter is 20 applied to the pixel, that's the temporal moment that this 21 claim is referring to. 22 JUDGE BHATTACHARYYA: Okay. For the adaptation 23 clause as well? 24 MR. LIGOTTI: Well, simply for -- excuse me, 25 your Honor?	Page 88 1 before de-artifact filtering, and then at the end in a 2 conclusion sentence of the brief, it will say and that's 3 why it can't be before it begins. Begins comes out of 4 nowhere, in their explanations, in their construction. 5 As we just heard from counsel for Respondents, 6 the reason why they're adding that word is that they 7 believe that the actual filter operation itself must be 8 excluded temporally from when the selection occurs. 9 And so that is where we get the red box from. 10 In reality, it is the moment at which the deartifacting 11 filter modifies the pixel that defines when selection and 12 adaptation must have occurred. The filter construction 13 itself can have all manner of different operations and 14 different computations that allow it to select, modify, 15 adapt, that parameter, and then when it ultimately uses 16 that parameter to modify the pixel, that's the point in 17 time that the claim refers to for, again, the adapts 18 limitation. 19 And so effectively, your Honor, that's what this 20 dispute comes down to, is whether or not the word "begins" 21 should be included in the construction and specifically 22 whether that creates this boundary I've shown on slide 68 23 around the deartifacting filter. 24 Took me a second to find it, but I wanted to 25 just kind of drive the point home with Respondents' slide
Page 87 1 JUDGE BHATTACHARYYA: Sorry. I'm just trying to 2 understand if the timing issue is different for the adapts 3 language versus the using language. 4 MR. LIGOTTI: So I mean, effectively, no. There 5 is no limitation on -- temporal limitation on selected. 6 But you can't really, if you have your timeline here, you 7 can't really have selected come after the filter modifies 8 the pixel. 9 So in that sense, yes, there is an absolute 10 limit to when the parameter must have been selected. But 11 it is not before filter processing starts, it is not before 12 filter operation starts. It is at the time -- that time 13 limit is at the time that the filter actually modifies the 14 pixels of the image of the frame it's trying to clean up. 15 Skip ahead to a slide here. I mean, one thing 16 that might be helpful is shown on slide 68, is I took that 17 figure 2 that we saw earlier, drew a box around it. And 18 effectively, what Respondents are saying is that there can 19 be no selection of the parameter once the process gets 20 inside that red box. It has to have happened before. 21 That before the whole process -- de-artifact 22 filter is 265. Before that begins, that's the part that is 23 not supported by the intrinsic record. 24 And you see that time and time again, when the 25 briefing addresses when adaptation occurs and how it's	Page 89 1 RDX-M4.15. The bottom bullet point, that bottom bullet 2 point is exactly what I have in my slide 68 with the red 3 box. They suggest that their construction fixes the 4 boundary at the beginning of the claimed filtering process, 5 not at an implementation-specific software suboperation. 6 They suggest that this term be modified from its 7 plain and ordinary meaning to restrict the selection to 8 before any aspect of the deartifacting filter process. 9 That's not supported in the intrinsic record, and the ALJ 10 should reject their construction. 11 If you have any further questions, your Honor, 12 I'd be happy to answer them. 13 JUDGE BHATTACHARYYA: So could you go back to 14 the figure with the deartifacting filter box. 15 MR. LIGOTTI: Should be coming up. Yes. 16 JUDGE BHATTACHARYYA: Okay. Is it your view 17 that that box, as described in the patent, also involves 18 selection of the parameter that's used for deartifacting? 19 MR. LIGOTTI: Yes, your Honor, it certainly can. 20 So in embodiments, the deartifacting filter 21 itself is involved with the selection and adaption of the 22 parameter. Figure 4 demonstrates that, as well as the 23 corresponding disclosure and specification of figure 4. 24 There's a passage on column 3, I believe lines 17 to 24 if 25 I remember correctly, also discloses and suggests that the

Page 90 1 deartifacting filter is involved with selection and 2 adaption in certain embodiments. 3 So yes, there are embodiments in the '784 patent 4 where the parameter can be selected as part of the 5 de-artifact filtering process, so long as when it comes 6 time for the deartifacting filter to actually modify the 7 image and change the pixel values, that parameter has been 8 selected and the decoder has adapted it. 9 JUDGE BHATTACHARYYA: Okay. Thank you. 10 And then, Mr. Lin raised an issue with respect 11 to the distinction between the apparatus claims and method 12 claims. Do you view that as an important distinction for 13 purposes of construing this term? 14 MR. LIGOTTI: Yes, your Honor. Well, I 15 certainly -- I view it as an important distinction at least 16 because all of the cases that were cited I believe on 17 Respondents' slide 5 were not raised in the briefing. They 18 were all method claim cases, process claim, method claim, 19 cases, so is Sound View. 20 So the idea that the Federal Circuit's case law 21 on implicit ordering requires adding in this strict 22 temporal construction to claim 9 and claim 13, which are 23 apparatus claims, I don't believe that that's appropriate. 24 I don't believe that that's what the Federal Circuit's case 25 law and implicit ordering suggests.	Page 92 1 to begin and finish before the filtering process. 2 And there's no embodiment in the spec that says 3 selection can be part of the filtering process. There is 4 none. 5 JUDGE BHATTACHARYYA: Okay. I believe 6 Complainant's counsel mentioned some parts of the 7 specification that he said show that that box labeled 8 de-artifact filtering is described as including in some 9 embodiments selection of the parameter. Do you disagree 10 with that? 11 MR. LIN: We disagree. There's no sentence, no 12 paragraph, in the spec that says that. 13 JUDGE BHATTACHARYYA: Okay. Thank you. 14 MR. LIGOTTI: Your Honor, may I be briefly heard 15 on this last point? 16 JUDGE BHATTACHARYYA: All right. 17 MR. LIGOTTI: So it's column 9, lines 8 through 18 12, which describes figure 4, for instance. Figure 4, 19 could you jump to slide 71, please. 20 Figure 4 is an embodiment, exemplary embodiment, 21 that Respondents pointed to to support their construction. 22 But importantly, the entire figure is referred to as an 23 exemplary method for region-based filter parameter 24 selection for de-artifact filtering. 25 So the whole process is the selection process,
Page 91 1 Whether that could apply to claim 15, you know, 2 that gets into whether or not this is a fact pattern for 3 the application of Sound View. 4 I should add that claim 15 is a method claim. 5 And in that we would dispute that Sound View motivates or 6 compels Respondents' construction. Sound View simply asks 7 to look at the claims and determine whether they require an 8 implicit ordering, and, if not, turn to the specification 9 to determine if the specification does. 10 But as I've shown in my presentation here, when 11 you look at the claims, there is absolutely nothing that 12 says or even suggests that the selection, which is the 13 disputed claim term here, must occur before de-artifact 14 filtering begins, which again Respondents have said that 15 construction means before any of the processing of the 16 deartifacting filter begins. 17 That is not supported, and that is not the 18 commonsense understanding, which is what Sound View asked 19 us to look at. 20 JUDGE BHATTACHARYYA: Okay. Thank you. 21 MR. LIN: Your Honor, I just want to recite the 22 claim language of claim 15. Wherein said decoding 23 comprises performing the artifact filtering on the region 24 using at least a region-based filter parameter selected for 25 the region, it is common sense that a selection process has	Page 93 1 and within that is the de-artifact filtering process. 2 Now, the other thing about these processes is 3 that they refer to function blocks and loop blocks, where 4 this is looping through the filtering process. And in this 5 embodiment, as part of that filtering process and those 6 loops, de-artifact filtering is occurring and 425 set 7 filter parameters is occurring, which Respondents have said 8 is the selection step. 9 So this is an embodiment where the specification 10 is making clear that region-based filter parameter 11 selection is part of the filtering process and the filter 12 itself, the actual application of that filter, is part of 13 the selection process as well. 14 And so this is a suggestion a person of skill in 15 the art would read this and understand, okay, there is not 16 strict temporal limitations, especially considering the 17 fact that the claims have none that require this sort of 18 begins language Respondents suggest. 19 And so in this way, this is at least one example 20 in the specification where there is support for not 21 imposing these strict temporal limitations from 22 Respondents' construction. 23 JUDGE BHATTACHARYYA: Which slide are you 24 referring to? Is this 71 of your slides, or -- 25 MR. LIGOTTI: Yes, this is Complainant slide 71.

Page 94 1 On the left side we have figure 4 of the '784 patent. On 2 the right side we have the corresponding disclosure from 3 column 9, line 8 through 12, which describes figure 4. 4 JUDGE BHATTACHARYYA: Okay. Thank you. 5 MR. LIGOTTI: Thank you, your Honor. 6 JUDGE BHATTACHARYYA: Would you like to respond 7 on that point? 8 MR. LIN: Yes. I just want to say that figure 4 9 shows you set the parameters and then you filter. There 10 are two steps here. You cannot combine those two steps 11 together. Figure 4 shows that. 12 MR. LIGOTTI: Your Honor, I just want to correct 13 the record. 14 JUDGE BHATTACHARYYA: Okay. 15 MR. LIGOTTI: It's not an argument. Complainant 16 slide 71 has an error in the citation. That should be 17 column 10, line 8 through 12. I just wanted to make sure 18 the transcript reflects that correctly. Thank you, your 19 Honor. 20 JUDGE BHATTACHARYYA: Thank you. 21 MR. LIGOTTI: Your Honor, we will now next turn 22 to the '877 patent. Okay. So the '877 patent disputed 23 claim term is "being applied jointly." But first, I should 24 point out that -- before even getting into the background 25 of what this patent is about and what the claim term at	Page 96 1 Now, for example, if the block at the top of the 2 screen is being decoded where the bird is in the lower 3 right of the frame, the four reference images shown on the 4 bottom could be available as reference images in the DPB 5 with the bird moving across each frame available for 6 reconstruction of the current block. 7 The '877 patent addresses coding and decoding 8 when the current image and the reference image are 9 different sizes. 10 So in the example with the four reference images 11 with the bird moving across the frame and the current block 12 with the bird in the lower right of the frame, the '877 13 patent solves the problem that arises because the current 14 block is smaller than the reference blocks. 15 Now, the prior art methods required storing 16 resized or resampled versions of the reference images. The 17 idea is that these frames are resized or resampled to match 18 the size of the current image, then they are stored in the 19 decoded picture buffer. 20 JUDGE BHATTACHARYYA: I'm sorry to interrupt. 21 But by different sizes, do you mean it's a different size 22 because it's further away so it looks like a different size 23 in the picture, or is it different sizes because screens 24 are different sizes, or what does different size mean in 25 terms of what we're talking about?
Page 95 1 issue is addressing, I wanted to note that TCL recently 2 challenged the asserted claims, all of the asserted claims 3 of the '877 patent in an IPR, and they submitted to the 4 Board that none of the claims needed construction. That's 5 what they told the Board. 6 We agree with that, including the disputed claim 7 term that we're here to talk about today, "being applied 8 jointly." 9 But Respondents now take the position that this 10 term needs to be construed. So let me back up and talk 11 about what -- a brief background as to the technology that 12 the '877 patent is addressing. 13 It concerns a problem that occurs with what's 14 known as adaptive resolution. Adaptive resolution changes 15 the size of an image, and it does that to account for such 16 things as changing network conditions. 17 So when the connection is good and the bit rate 18 is high, a frame might have higher resolution, more pixels, 19 and when the connection is bad, the bit rate is low, it may 20 drop to a lower resolution, fewer pixels, as shown on the 21 left and right of Complainant's Exhibit 89. 22 When a current block is decoded it's 23 reconstructed from similar reconstructed reference images, 24 and these similar reference images are stored in the 25 decoded picture buffer or the DPB, essentially memory.	Page 97 1 MR. LIGOTTI: Yes, your Honor. 2 Different sizes means different resolution. So 3 imagine, for instance, when the bit rate is low, the frame 4 shrinks down to 480P. So there's a very, very small image. 5 If you tried to display it on these more modern screens, a 6 480P image would be very blown-up, very low resolution. 7 Contrast that with 1080P or 4K, much higher resolution. So 8 on any given screen, it's the same size screen, but there's 9 a lot more data, a lot more bits, so you don't see those 10 stretched out artifacts of looking at a low-bit-rate image 11 on a large screen. 12 Using this projector as an example, if the bit 13 rate was great and the frames were coming in at 4K, very, 14 very large, lots of resolution to work with, they were 15 being saved in the decoded picture buffer. 16 But say, for instance, that the bit rate dropped 17 for a few minutes or a few moments. Well, the way these 18 different decoders and encoders work is they're pretty 19 smart about that and they say, okay, my bit rate is low, so 20 I'm actually now sending lower-resolution images to be 21 decoded on the other side. 22 And so those are coming in, and in the prior 23 art, they would be resized and blown up, resampled, to get 24 back to that 4K size that's being decoded. And after doing 25 that, after it resampled the frame, and made it larger in

Page 98 1 terms of resolution, it would save it. 2 So if there were 20-, 30,000, frames coming in 3 that needed to be resized, it was saving all of those into 4 the memory, took up a lot of memory space. 5 And the reason is because when you go to 6 reconstruct the current block using what's in the picture 7 memory in the prior art, it required that those be the same 8 size. So if you had a size mismatch, had to be fixed, 9 resized, and then it would save it. 10 The '877 patent solves that problem, because it 11 allows for the current image to be reconstructed without 12 storing the resampled or resized image in the memory. 13 Instead, the resampling and any motion 14 compensation interpolation that has to occur are applied 15 jointly on the reconstructed -- to reconstruct the current 16 block. 17 So in the example that we have here, when any of 18 these larger -- this is sort of the reverse. The current 19 block to be decoded is a smaller resolution than what is in 20 the decoded picture buffer. Again, size mismatch, it's 21 okay if it's larger in the DPB, decoded picture buffer, 22 smaller in the current block. But in the prior art, those 23 needed to be -- the size difference needed to be addressed 24 and resized. 25 The '877 patent allows for those	Page 100 1 move forward, it can do it on the fly. 2 So when there's that mismatch, the '877 patent 3 invention allows for the larger or smaller reference 4 picture to be used just fine to decode the current block, 5 even though it's mismatched. 6 And Respondents get that. They acknowledge the 7 problem. This is from their brief. They explain that in 8 the prior art process, those functions, the resampling and 9 motion compensation, remain separate stages. SCF filtering 10 generates a resampled reference image stored in the decoded 11 picture buffer, and motion compensation later operates on 12 that image. 13 And they also acknowledge on the right side of 14 the screen, slide 94 of complainant's slide deck, they 15 acknowledge the invention. The invention changes that 16 arrangement. Those are their words. 17 And in the '877 patent invention, a single 18 horizontal filter and a single vertical filter are applied, 19 where each of those two filters perform resampling and 20 motion compensation interpolation. 21 In this way, no separately resampled version is 22 stored in the decoded picture buffer. 23 That's what the specification tells us. The 24 operations of, this is from column 5 of the patent, "the 25 operations of upsampling or subsampling," that's that
Page 99 1 larger-resolution reference images to still be used to 2 handle the reconstruction of the current block, but without 3 doing a resizing, saving that in the memory, and then using 4 that for decoding the current block. 5 Instead, the '877 patent invention jointly 6 resamples or resizes and does the motion compensation 7 interpolation to create a reconstructed reference block 8 that can be used to decode the current block. 9 So if, for instance, when we have the bird 10 moving across the frame here in the four frames in the 11 reference -- in the decoded picture buffer, all of which 12 are larger resolution than the current block, the '877 13 patent would utilize one of those and jointly resample and 14 compute the difference between the motion of the bird to 15 arrive at a reconstruction that can be used with the 16 smaller-resolution current block. 17 JUDGE BHATTACHARYYA: And what's the advantage 18 of doing it jointly? Does the patent say anything about 19 that? 20 MR. LIGOTTI: Absolutely. The advantage of 21 doing it jointly as specified in the patent is that that 22 removes that requirement to save the resized or resampled 23 version in the decoded picture buffer. So it saves memory. 24 Instead of having to do all of these resampling 25 steps, saving it into the memory and then having those two	Page 101 1 resizing, also known as resampling to handle both the up 2 and the down, so "the operations of upsampling or 3 subsampling of the data of the reference image and of 4 motion compensation of a reference block to determine the 5 prediction block BP are performed jointly by applying a 6 separable interpolation filter successively on the lines 7 and on the columns of" the "pixels of the reference block." 8 Simply put, each interpolation filter is a 9 single filter that does two separate things. 10 The specification also explains that these 11 calculations also involve calculations and computations 12 separate from the actual filters. 13 For example, shown here on slide 96 from column 14 6 of the patent, these are calculations as to the size 15 difference between the size of the reference image and the 16 current image. The specification explains down at the 17 bottom that the filters GFH and GFE are then successively 18 applied. 19 I bring this up because it isn't clear to us 20 whether Respondents' proposed construction would read out 21 these embodiments where computations and calculations as to 22 the size difference between the current frame and the 23 reference frame would be read out because they're done 24 before and then the filters are then applied using those 25 size differences.

Page 102 1 If so, if that's what their construction would 2 do, it's wrong for that reason because it's straight from 3 the specification. But if not, it kind of brings me to my 4 next point, which is -- I'll skip this for just a moment. 5 Which is that when we look at their construction for being 6 applied jointly, it is a filter operation of respective 7 filters are grouped together in a single filter operation. 8 But just like TCL told the Board in its IPR 9 petition, there's no need to construe this term. The 10 parties understand what it means. Here on the slides I 11 have a couple snippets from their briefing where they 12 continually explain what this term means. It's what I just 13 walked through. 14 I've shown you on the slide the term describes 15 the relationship of two filter operations within the single 16 claimed directional GF filter. They explain their 17 construction is functional, not hardware-specific. They 18 argue that their construction does not require simultaneous 19 execution in a single signal pass or one physical hardware 20 or software module. They don't seek to impose any 21 particular hardware architecture. So why construe the term 22 if it's understood? 23 Respondents suggest that the dispute is whether 24 the resampling and motion compensation functions may remain 25 separate independent filtering stages or must be grouped	Page 104 1 single horizontal filter GFH and a single" GF "filter GFV." 2 The claims go on to specify what those filters 3 do, namely resampling and motion compensation being applied 4 jointly. But the notion that Respondents' construction 5 should be adopted because the claims don't require each of 6 the GF filters to be on its own a single filter is wrong. 7 They do just that. The claims do just that. 8 Okay. So why not just adopt Respondents' 9 construction, then? Well, there's a few -- there's a few 10 problems, and the main problem is that it inject new 11 language into the claims, such as "grouped together," and 12 it also includes phrases that never appear anywhere in the 13 intrinsic record, like "respective filters" and "single 14 filter operation." 15 So for those reasons, it injects ambiguity into 16 the claim term. If these terms are not in the intrinsic 17 record but somehow mean something different than what the 18 claim already says, that invokes ambiguity. 19 And the other problem with using these different 20 terms that Respondents propose is that they're not the 21 words the patentee chose. The Federal Circuit has made 22 clear, inventors are masters of their claims, and the words 23 they use to describe and claim their inventions are 24 decisive and binding. Simply put, we don't change claim 25 language just to change it.
Page 103 1 within the single directional GF filter. 2 First our understanding of this sentence in 3 their argument is that it does not read out those 4 embodiments in the specification that I just showed you, 5 where the computations such as the computation of the size 6 difference between the reference frame and the current 7 frame are not excluded by what they're saying here and that 8 that can happen before the filters are applied to do the 9 filtering. 10 But like I just said, if that's what this 11 sentence would read out, then their explanation fails 12 because it reads out a preferred embodiment. 13 But if what they're saying here is that would be 14 included, and really at the end of the day what matters is 15 there is a single vertical filter and a single horizontal 16 filter, well, that's what the claim says already. There's 17 no need for construction. 18 I have shown here the full claim 1. Claims 4, 19 7, and 8 are similar in these respects. But I put a green 20 box around the portion at the top of the claim before the 21 portion that's being addressed today and the disputed claim 22 term. 23 In the green box, the claim already requires 24 motion compensation -- "motion componenting said reference 25 block of said reconstructed reference image by applying a	Page 105 1 Now, Respondents' justification for their 2 construction is that these new terms, like grouped together 3 and respective filters and single filter operation, are 4 just an explanatory articulation of plain and ordinary 5 meaning in the intrinsic context. Because somewhat similar 6 terms appear elsewhere in the specification. 7 But rephrasing terms or just using synonyms of 8 similar terms is not genuine claim construction, especially 9 where the plain language of the claim is already readily 10 understood, like in this case. 11 Indeed, that's what's shown at the bottom of the 12 slide in the 1376 investigation. 13 Now, Respondents double down with their position 14 that their proposed construction is, okay, because there's 15 only these minor semantic differences between the term 16 "using a single filter," which does appear elsewhere in the 17 intrinsic record, although it's not written exactly that 18 way in the claim, and Respondents' chosen phrase, "grouped 19 together in a single-filter operation," which itself never 20 appears anywhere in the intrinsic record. 21 But that's exactly the problem. If there's no 22 difference, why are we changing the language of the claims? 23 Indeed, as we saw a few slides ago, in the green box, the 24 claims already recite the use of a single filter GFH and a 25 single filter GFE.

Page 106 1 Respondents' proposed construction should also 2 be rejected because it renders the claims facially 3 nonsensical. And the Federal Circuit has explained that 4 such constructions cannot be correct. So the right side of 5 the slide shows how the claim would read if Respondents' 6 proposed construction is applied to the claim. It's 7 nonsensical. 8 Essentially, especially in a claim term directed 9 to two filters GFH and GFV, the reference alone to 10 single -- or to respective filters is especially confusing. 11 But once again, if all Respondents are trying to 12 achieve with this construction is the notion that there is 13 a single horizontal filter and a single vertical filter and 14 that each of these single filters jointly applies 15 resampling and motion compensation, that's already in the 16 claim, and there's no need to reconstrue the term. 17 With that, your Honor, unless you have any 18 questions, I'll turn it over to counsel for Respondents. 19 JUDGE BHATTACHARYA: Thank you. No questions 20 at this time. 21 MR. ANZALONE: Good afternoon, your Honor. I'll 22 be presenting on this term. Good to be before you again. 23 These slides are all marked with RDX-M5 and they 24 will go from RDX-M5.1 to 29. 25 We're talking about the phrase being applied	Page 108 1 with them, that's why we were doing it, to simplify it to 2 make it a single claim construction dispute. 3 Let's get to the real issue and not to the 4 grammar, which is, and which was never answered by opposing 5 counsel, whether filtering operations of the motion 6 compensation filter and the sampling conversion filter can 7 be separate and/or independent. 8 And everything in this patent and everything 9 Mr. Ligotti talked about screams that they can't. The 10 whole point of this invention is you don't separate or have 11 them independent, you combine them, you compose them, you 12 group them together. 13 What we're talking about are operations 14 functions. And the difficulty here with functional nouns, 15 as the Court is probably aware, where it's like lock or 16 filter, it's a noun, but it's also a function. And we want 17 to avoid the situation where you draw an arbitrary line 18 around our entire television set and say that's a single 19 filter. 20 No, you can't do that. It contains a filter, 21 but that is not the filter. The filter is the part that 22 does the operation. 23 And if you read this patent, you will see that 24 everything in this patent is talking about functions. 25 There's no emphasis on particular structures or doing it.
Page 107 1 jointly. Let's talk about the fundamental dispute on claim 2 scope on slide 2, plain and ordinary meaning. And the 3 issue is what is the plain and ordinary meaning of the word 4 "jointly." 5 Our proposal is the filter operations of the 6 respective filters are grouped together in a single filter 7 operation. 8 Now, why do we say respective filters in here? 9 And, your Honor, this is another example of no good deed 10 goes unpunished. 11 Being applied jointly appears twice in the 12 claims, so we wanted to make this a single dispute over the 13 real issue, which is, what does being applied jointly mean. 14 And you will see the first time the phrase 15 appears after the motion compensation interpolation filter, 16 the vertical one, and the sampling conversion filter, 17 vertical one. And the second time it appears, it's before 18 the second set of filters, the horizontal set of filters. 19 So clearly, what we were trying to do is to make 20 it clear that we're talking about the respective filters, 21 the vertical ones, the phrase which refers to the vertical 22 filter, and the horizontal ones that refers to the 23 horizontal filter. 24 Because of that, they have a slide 105 that it's 25 nonsensical and they're confused when we discussed this	Page 109 1 It's basically how do you decode to do this. 2 So let me proceed. Okay. So what is the 3 dispute over? You might remember, your Honor, we had a 4 case management conference before you on July 17. We said 5 our proposal for what the plain and ordinary meaning was, 6 InterDigital did not, and you directed them to tell us why 7 they disagree with our constructions. 8 And you see on slide 3 their issues with our 9 proposal. They say we import at least a grouped together 10 in a single filter limitation into the claim term, and gave 11 us no further explanation, no alternate construction, which 12 seems to be perhaps what they were proposing today. They 13 just said grouped together in a single filter is 14 unacceptable, and so that's why we're here. 15 All right. So what's the real dispute, if we 16 leave aside grammar and irrelevancies? The word "jointly" 17 has many ordinary meanings. And when a word -- an ordinary 18 English word has many ordinary meanings, you read the 19 intrinsic evidence to figure it out. 20 And here, fortunately, the intrinsic evidence 21 we're going to rely heavily on the other claim language, 22 which even opposing counsel did in his presentation. We're 23 going to show you the specification, we're going to show 24 you the purpose of the invention, and we're going to show 25 you the prosecution history all show that there's a

Page 110 1 specific meaning of jointly that indicates it can't mean 2 you do things separately or independently. The operations 3 have to be combined. 4 And I'm not going to bore you again with an O2, 5 but clearly there's a real dispute here as you see. Can 6 these operations be done separately or independently or do 7 they have to be grouped together. 8 All right. Now, counsel asked why are we even 9 talking about this? We can use ordinary meaning. 10 Well, you or anyone could Google or go anywhere 11 and say what does jointly mean, and it means a whole bunch 12 of things. It can mean simultaneously, parallel, 13 concurrently, together, in tandem, communally, shared, 14 mutually, collectively, interconnected, blended as one. It 15 can mean so many different things. That's where Phillips 16 comes in. 17 And to give you an example, using baseball if 18 that's okay, Babe Ruth against the Chicago Cubs hit three 19 home runs in 1926 in the World Series. Reggie Jackson, if 20 you're a Dodger fan you don't like this, did that also in 21 like '78. Albert Pujols did it many years, together. 22 If you look at a baseball record book, it says 23 the record for home runs in a World Series game is jointly 24 held by Babe Ruth and Albert Pujols, even though they did 25 it independently and separately and Babe Ruth was long dead	Page 112 1 the claim, as they pointed out, but it goes further. The 2 claim you will notice uses the term "GF" as an 3 abbreviation. It also uses MCIF and SCF. 4 So why does it refer to GF when it's talking 5 about doing a joint operations of the motion compensation 6 and sampling conversion? It's using that because G stands 7 for grouped. It's a grouped filter. That's why the term 8 was chosen. 9 And the other point there is there is an 10 equation in the claim that shows what it does, and the 11 equation has little function -- the paragraph signs, and 12 there's another paragraph sign, which shows there's a 13 motion function and then there's a sampling conversion 14 function. 15 As pointed out in the specification, as a math 16 person would understand, that means it's a composition, 17 it's a combination of two functions. That's what the 18 parenthetical means. 19 So grouped together in a single operation comes 20 straight from the claim language and the purpose of the 21 invention, and the specification you will see, they're not 22 talking about embodiments, they're talking several times 23 about the invention is grouped together, the invention is 24 jointly performing these operations. 25 And, you know, to nail this even further and
Page 111 1 before Albert Pujols was born. 2 So we have a word that has many different 3 meanings, and I'm going to go through the intrinsic 4 evidence and show you all of the intrinsic evidence 5 supports that it has to be grouped together into a single 6 operation. 7 And again, Phillips, the Court is well aware of 8 that. The Medrad case, you have to look at not in a 9 vacuum, but you read the intrinsic evidence. 10 Okay. Purpose of the invention, I agree with 11 everything opposing counsel said about the purpose of the 12 invention. Purpose is you group the two filters together 13 to jointly perform motion interpolation and sampling. The 14 operations have to be jointly performed, which is where we 15 get the together part of our construction. 16 The claim language, you will see all of the 17 independent claims use two different adverbs here. The 18 vertical filter group filter and horizontal group filter 19 act successively on lines and columns, but they contain a 20 motion compensation filter and a sampling conversion filter 21 that act jointly. 22 So successively versus jointly, that means 23 jointly has to mean something different than successively, 24 and what it means is you don't do things one after another. 25 The other part of this is single filter is in	Page 113 1 probably beat a dead horse, jointly applied, they deleted 2 that from the claims during prosecution. Examiner hit them 3 with a rejection over Robertson, which showed sequential 4 performance of sampling and motion compensation. They 5 added it back into the claims and argued on that term that 6 it was distinguishable over Robertson. 7 So that again shows we can't talk about stages 8 and separateness. 9 All right. Purpose of the invention, and I 10 don't think opposing counsel will disagree with anything 11 I'm saying here. If you look at column 6, lines 2 to 7, 12 "by advantageously grouping," and remember grouping is in 13 our claim so we take it straight from the intrinsic 14 evidence, "the filters for interpolation and resampling, no 15 resampled reference image is stored in the" -- that stands 16 for decoder buffer memory, "in addition to the 17 reconstructed reference image." 18 In other words, the whole purpose to save memory 19 is accomplished by grouping the filters for interpolation 20 and resampling. You are grouping those two functions 21 together. And again, I'm not going to spend time on stuff 22 that counsel already covered, but, your Honor, if you will 23 look at figure 3 and column 2 at 8 to 13, they talk about 24 in the prior art you would first perform sampling, in other 25 words you might upsample, or a more likely thing if you

Page 114 1 were watching a football game last night, and you had H 2 definition -- high-definition TV, and then there was 3 lightning or something, the resolution goes down, it might 4 shift to standard definition TV. 5 In that case, you're going to down-sample, fill 6 in -- fill it in, even though it's lower-resolution and 7 make it appear as if your TV is still showing the same 8 football game with the same resolution. That's kind of a 9 down sampling example. 10 Motion conversion as opposing counsel pointed 11 out, you're trying to predict what's going to happen next 12 in a picture. So if you're doing this courtroom, you're 13 going to have everything is staying still except I'm waving 14 my arms around like a lunatic, so you're going to watch my 15 hand for movement and do a motion vector that follows my 16 hand. 17 That's kind of motion compensation. 18 All right. And so the solution set forth in the 19 patent, and they pointed to where we agreed this is pointed 20 to in the patent, this is what they say the invention is, 21 is you combine two separate filter steps. It's the single 22 step in a single group filter, it does both. 23 And to accomplish this, the invention, I'm using 24 quotes because that's how they described it, they didn't 25 say a preferred embodiment, the invention does both, and it	Page 116 1 you have the current image. 2 So the issue here is the reference image on the 3 top left and the current image on the top right, there's a 4 mismatch; right? Your reference images say in your camera 5 are thumbnails, your thumbnail images, and now you have a 6 high definition on the current, and, oh, boy, you want to 7 be able to predict it. 8 So this is the motion -- remember, this is 9 called the motion compensation method. So this method is 10 not only doing motion compensation, but you can see what 11 each of the two different filters, the horizontal and 12 vertical, are doing. 13 It's taking that reference image, and you can 14 see it's looking at the current, seeing it needs to double 15 the size, so the horizontal filter is going to interpolate 16 and spread out those same values but spread them out 17 over -- make them wider. So it's operating on the rows and 18 making them wider. 19 Now you have a temporary -- temporary prediction 20 here. Now what are you going to do? Now you're going to 21 successively apply, not at the same time, not jointly, 22 you're going to successively apply the vertical filter to 23 what was already done, and you're going to add -- you're 24 going to look at the columns and increase that. 25 So this is basically showing exactly what we
Page 115 1 does that, in the claim language your Honor you will see 2 there's a step called motion compensation or interpolation. 3 That's the step we're talking about where all this is 4 happening. 5 They talk about this filter, which instead of 6 just doing motion compensation, it's now also doing 7 resampling, resampling conversion. 8 So in my example, you are down-sampling from HDR 9 to SDR. 10 It depends -- this motion compensation filter 11 depends on the size of the reference image and the size of 12 the current image, and that's repeated several times, and 13 they refer to it as the invention both in figure 8, in 14 column 3 at four different places. 15 In the invention, this same filter is not only 16 doing motion compensation, but it's taking care of 17 resampling. 18 Figure 8 basically is described as the motion 19 compensation method according to the invention. It doesn't 20 say preferred embodiment, it says according to the 21 invention. And you will see that the steps are bottom 22 right, your Honor, is kind of the end result, the 23 prediction block. 24 You will see on the top left we have the 25 reference image, and you have -- the bottom and top right	Page 117 1 think the claim requires and what they said is the 2 invention. You perform motion compensation and resampling 3 in a single step. 4 And again, column 2, column 3, several times, 5 talks about the interpolation filter GH and GV, that's in 6 the claims, those filters, the single filters, they are 7 going to depend on the size of the reference image and the 8 size of the current image, so they're going to account for 9 both motion compensation and they're also going to account 10 for sampling conversion. 11 And that's how you achieve what they say is the 12 invention, which is by doing one step instead of separate 13 steps, you save some buffering, you save some processing 14 time. And I agree that that's technically what would 15 happen. 16 All right. Now, your Honor, I did not hack into 17 their system or steal this from them. This is their slide, 18 but where I got it was they tried this case two years ago 19 before Judge McNamara, and I thought this was a nice slide, 20 and they used it today to describe what's going on, right. 21 It was slide 40 from some presentation they gave 22 in the 1373 investigation. It's slide 9 in ours. 23 But they here describe the system pretty well, 24 and you can see there's a mismatch between the current 25 image and your reference images. And you can see the bird

Page 118 1 is flying, and I'm not sure whether you're comfortable or 2 uncomfortable, but I can understand that, but I chose law 3 for a reason, but you can see there's a bird going down on 4 the right there. 5 So what you're going to do to motion-compensate 6 and predict what's going to happen next, and you see the 7 current block predicts that that bird is going to be 8 landing. You're going to do a vector, you're going to 9 look -- you're going to do a matrix where you're going to 10 compute based on -- I'm going to take sample X1, X2, X3, 11 X4, and I see a bird is moving horizontally to the right 12 and moving vertically downward. So that's the motion 13 compensation part. 14 And then you can see in the InterDigital slide, 15 they show the smaller box in red, and that's where you're 16 down-sampling. 17 So you're going to take the reference image, 18 you're going to motion-compensate, and you're going to 19 down-sample it concurrently, so one filter matrix operation 20 to do your prediction block. 21 What does this mean to the purpose of the 22 invention? The Enzo case is controlling. There the issue 23 was detection, what the word "detection" means. And the 24 issue was does it require indirect detection or direct 25 detection, and the Court said you could look at what the	Page 120 1 for that, a lot of colors on it. Claim 1. It's busy 2 because there's a whole bunch of ways you can see being 3 applied jointly means these operations have to be grouped 4 together in a single filter operation. 5 So being applied jointly is, let's see, in blue 6 there. And you will see by the way, your Honor, talking 7 about the respective filter operations in our construction, 8 you will see it appears twice, and first time it's done by 9 the two vertical filters, second time it's done by the two 10 horizontal filters. That's why we said respectively with 11 this. 12 Okay. So what does this mean. Well, you will 13 notice in blue, those filters are applied jointly, but 14 they're inside, if you look above, a single horizontal 15 filter and a single vertical filter that -- as you see the 16 word before, applying successively on the lines and 17 columns. 18 So when you're doing motion compensation and 19 resampling, you're doing it jointly. When you're doing 20 lines and columns, you're doing them successively. 21 So the claim is setting up a very clear 22 distinction that jointly cannot mean one after another or 23 successively or stages. It's the opposite, a nice 24 comparison there. 25 So this -- so our construction makes clear, hey,
Page 119 1 purpose of the invention is in deciding that. 2 Here, your Honor, based on what opposing counsel 3 said, their own slides, everything in the patent, you're 4 going to see the invention is directed to grouping together 5 in a single operation motion compensation and resampling. 6 The patent specification drawings indicate the 7 purpose. You have to group motion compensation and 8 sampling conversion together into GF, a single grouped 9 filter, and that's the group filter in the claims jointly 10 performs those interpolation and sampling operations. 11 In terms of -- I've already described why we 12 don't want a situation where jointly applies to Albert 13 Pujols and Babe Ruth to this situation, where it's 14 separate. It doesn't require separate and independent. 15 So we have to use words to explain what jointly 16 means. And we've taken words straight out of their patent, 17 out of their prosecution history, and out of their claim to 18 explain. And so, yes, it's not verbatim, we didn't say 19 jointly means jointly, but the Pause Technology case is a 20 wonderful case for this. It basically says you can use 21 words that don't appear in the claim as long as the 22 interpretation accords with the words chosen by the 23 patentee. You will see every word I've taken accords with 24 a word they have used in the patent or prosecution history. 25 All right. So this is a busy slide, apologize	Page 121 1 the motion compensation, sampling conversion can't be 2 separate or independent, and the Bicon case, Federal 3 Circuit, says you have to give meaning to all terms. If 4 successively -- if successively -- if successively was used 5 for how you apply this filter to lines and columns, then 6 jointly has to have a different meaning when applied to 7 motion compensation and resampling. 8 All right. Next example of where we are saying 9 something is grouped together in a single filter operation. 10 Well, as counsel pointed out, yes, single is in the claim. 11 Single appears several times, and you will see that that 12 grouped filter, GFV and GFH, it's a single filter, right, 13 and that's what's performing these operations. 14 And you will notice something else, again 15 depending on if you're comfortable with math, in purple you 16 are seeing two equations there. What is this -- what is 17 this filter, this single filter, doing. And it's showing 18 that the sampling conversion function is within the motion 19 compensation interpolation function. 20 It's a parenthetical inside a parenthetical, all 21 right. 22 So what does that mean? Well, that means it's 23 combined. It's a combination of two functions. It's a 24 composition. As the patent says at column 5, line 58 to 25 line 62, in fact, I think it's the first sentence in column

Page 122 1 6, that's a function composition. 2 That's where we get grouped together, all right, 3 single operation. Motion compensation, sampling 4 conversion, they're grouped together in a single operation. 5 All right. And the other point, where do we get 6 grouped? As I pointed out already, the specification, the 7 first time it talks about this GF filter, it points out 8 that these two motion compensation and sampling conversion 9 filters are grouped into a single GF filter. GF is an 10 abbreviation for grouped, and I don't think they will 11 dispute that. 12 And you will see that they use abbreviations in 13 the patent for all of the filters. GF for a grouped 14 filter, MCIF for a motion compensation interpolation 15 filter, SCF for a sampling conversion filter. All of the 16 language in our proposal comes straight out of our claims. 17 I want to get back to where we were punished for 18 saying respective, and this relates to their slide 105 and 19 respective filters. 20 As I pointed out before, applied jointly appears 21 twice in the claim and is preceded by vertical filters in 22 the first instance, horizontal filters in the second 23 instance. 24 So we say respective filters to differentiate 25 when it's talking about vertical filters and horizontal	Page 124 1 antecedent basis, I'm trying to understand a claim. 2 And the ITC and the Federal Circuit in the Cisco 3 case say you don't find this argument persuasive in view of 4 the specification and claims. 5 So I think anyone of ordinary skill would 6 understand what we meant by respective filters, regardless 7 of slide 105. 8 Then again I'd like to point out they talk about 9 the Becton case, and my memories of that case, it talks 10 about nonsensical. And there it was truly nonsensical 11 where there were two different components and the patentee 12 tried to say the two components could be the same thing. 13 The Court pointed out it was nonsensical because 14 component A had to be connected to component B and 15 component B had to extend from, and they said this renders 16 the claim nonsensical, same thing. 17 Here we're just talking about whether my grammar 18 was correct. 19 Now let's talk about how they characterized the 20 invention in their own words. All right. You will see in 21 column 5, lines 57 to 60, "according to the invention, 22 they don't say an embodiment, the invention, "the 23 horizontal filters MCIFH and SCFH are grouped into a single 24 filter GFH." 25 Then they say likewise you do the same thing
Page 123 1 filters, all right? I'm here to argue on the main area of 2 disagreement and not quibble about words, and if your Honor 3 wants to massage respective filters, that's fine. 4 But the dispute is whether -- can it be separate 5 and independent. And we're saying it cannot. 6 But if we take them at their strictest, right -- 7 we want to play a game of grammar here, all right. So 8 first two bullet points, this is exactly how the claim 9 language appears, MCIFV and SCFV being applied jointly. 10 The second instance, MCIFH and SCFH being 11 applied jointly. 12 Okay. Our proposal is being applied jointly 13 means it's grouped together in a single filter operation. 14 Unless you're trying to be confused, a person of ordinary 15 skill in the art would understand how you can plug that in 16 and understand our construction. 17 You would put the filter operations of the 18 respective filters before those two filters, and then you 19 would put our grouped together in a single filter 20 operation. That's pretty clear English. This is what we 21 would call a gotcha or a debater's point. 22 The ITC and Federal Circuit have dealt with this 23 before, where someone has a claim and they say in their 24 brief, they say, well, there's no antecedent basis, and, 25 you know, I'm not trying to draft a claim to meet	Page 125 1 with the vertical filters, grouped into a single filter, 2 and grouped together in a single filter operation is in our 3 proposed construction. 4 So again, I'm not going to bore you with, you 5 know, Phillips. You of course look at the specification, 6 that's the best guide. And we're not importing limitations 7 into the claim. The SafeT Manufacturing case, what I'm 8 doing here is reading this and trying to understand what 9 applied jointly means, and I can understand by reading the 10 specification what applied jointly means, they're grouped 11 into a single operation. 12 All right. And this is done consistently 13 throughout. In slide 17, in the invention, the two 14 operations are jointly performed in a single filter and 15 single filter operation. 16 I already showed you figure 8, we talked about. 17 Figure 8 is described and characterized as "the motion 18 compensation method according to the invention." 19 And the claim talks about motion compensation 20 step. 21 So the invention is that figure 8. And you will 22 see in column 2, the invention, the operations of 23 upsampling or subsampling, and of motion compensation, are 24 performed conjointly. 25 And the interpolation filter or the motion

Page 126 1 compensation filter depends on the n index. In other 2 words, this is another way of saying, to simplify for you, 3 it's basically a way of saying we're going to have a filter 4 that does motion compensation and resizes or resamples. 5 It's going to do that together. That's also what they say 6 multiple times about the invention. 7 The interpolation filter which is doing the 8 motion compensation is going to have to depend on the size 9 of the reference image and current image so it's going to 10 have to do conversion. Again they are saying it's the 11 invention that's doing this. 12 They also do this for not only decoding but 13 coding. But column 7, line 54. According to the 14 invention, the horizontal filters are grouped into a single 15 invention. 16 Column 8, line 3, the operations of upsampling 17 and subsampling and of motion compensation are performed 18 jointly, all consistent with our proposal. 19 And why is this important? When you say -- you 20 know, patent lawyers know you shouldn't be saying the 21 invention is, in your specification. You will see how many 22 times in most patents people say, oh, according to an 23 embodiment, according to a preferred embodiment. 24 But InterDigital was fairly clear and direct 25 here that this is the invention we were talking about,	Page 128 1 So it's combining them into a single function 2 performed by the group filter. So being applied jointly, 3 our construction is a functional one. 4 As opposing counsel pointed out, we made a whole 5 bunch of disclaimers in our own brief saying we're not 6 saying the structure has to be a specific way, or it has to 7 be in a certain component or whatnot. But we're tying it 8 exactly to the functional language in the claim. 9 Because as I pointed out, when you say filter to 10 an engineer, does it mean a component or does it mean a 11 subpart of a component or whatnot? And we want to avoid 12 the situation, your Honor, where you simply draw the box 13 around a lot of code and say it's a single filter, when 14 it's really doing different things. Or in this case, we 15 have decoder chips supplied by a third party. We want to 16 avoid the situation where they just say they're all in the 17 same chip so it's a single filter. So that's the concern 18 we have with saying single filter without tying it to the 19 functional operations. 20 Lastly, to the extent we needed to nail this any 21 further, what the prosecution history shows, and it's on 22 RDX-M5.21, there's a history of the phrase "jointly," 23 right. And that history shows that the original claims as 24 filed based on the priority documents carried forward joint 25 performance.
Page 127 1 several parts of the specification. In the Microsoft v. 2 Multitech case, they point out these statements are not 3 describing a preferred embodiment but broadly describe the 4 overall inventions. Every one of the statements I pointed 5 to is talking about the invention. 6 And in Verizon v. Vonage case from the Federal 7 Circuit, when a patent "describes the features of the 8 'present invention' as a whole, this description limits the 9 scope of the invention." 10 Your Honor, I'm not using disclaimer or anything 11 like that. What we're using the spec here for is just to 12 understand which of the many other meanings of jointly 13 applies here. 14 But here the specification confirms motion 15 compensation, sampling, are grouped into a single group 16 filter, which is the composition of two filters. 17 Again I want to talk about why we have grouped 18 together in a single operation. Not to frighten anyone, 19 those are those two equations that are actually in the 20 claim. And I'm talking about what's on the right-hand side 21 of the equation, it's taking two functions, it's taking a 22 motion compensation function and a sampling conversion 23 function, and it's embedding the sampling conversion 24 function within the motion compensation function. And 25 that's what it's doing.	Page 129 1 But in November 2017, they deleted it from the 2 claim, but they kept in all the other language in the claim 3 that opposing counsel said was sufficient to understand it, 4 right. 5 They added in that it has to be a single filter. 6 They added in those equations about what the group filter 7 has to equal. They added in the requirement "wherein 8 there's no resampled versions stored." Those three things 9 were added in, jointly was kicked out. 10 And then the examiner rejected it over 11 Robertson's. He said there's resampling in Robertson used 12 with motion compensation. And you can see in Robertson, 13 there's blocks for resampling, and then the same stream 14 goes to motion compensation. 15 So after the rejection, July 2018, the 16 applicants added "being applied jointly" back into the 17 claim, and they argued based on that limitation. And they 18 distinguished Robertson's successive filters, and again 19 that also appears earlier in the claim in replying to 20 vertical versus horizontal lines and columns done 21 successively. 22 He says Robertson's successive filters are not 23 applied jointly using a single filter. 24 To confirm this further, when the examiner 25 allowed the claims, he said what's absent from the prior

Page 130 1 art. He said joint application of interpolation filter and 2 resampling, and he even used our term "respective single 3 filters." So respective even appears in the prosecution 4 history. 5 So I'll just briefly go through this. But in 6 the priority docket PCT application shown on slide 22, 7 motion compensation step is performed jointly at a 8 resampling step. 9 There was a preliminary amendment filed shown on 10 slide 23, which kept performed jointly, but it then talked 11 about the respective filters. It's performed by -- it's 12 performed by a vertical filter, performs jointly, motion 13 compensation and resampling, and then a horizontal filter 14 performs motion compensation and resampling. 15 All right. So here's the important amendment, 16 November 2017, RDX-M5.24, the November 24, 2017 response, 17 production number from InterDigital 149500016092 to 93. 18 You will see they deleted the phrase that says 19 motion compensation resampling are performed jointly, but 20 they added in there has to be a single horizontal filter. 21 They added in there has to be a single vertical filter. 22 The group filter vertical. They added the equations 23 showing that the group filter -- each group filter was a 24 composition of motion compensation and sampling version. 25 And they added the limitation, that wherein clause at the	Page 132 1 the claim, "MCIF horizontal and sampling conversion filter 2 horizontal being applied jointly." 3 All right. So these were added to the claims 4 after the PTO found that the claims without that were 5 unpatentable in view of Robertson with the other 6 combination. 7 And applicant relied on applied jointly in the 8 remarks. He indicated that Robertson has clearly two 9 filters and argued expressly the resampling and motion 10 compensation are, quote, clearly not applied jointly using 11 a single filter. 12 All right. So this supports our construction. 13 So the filtering operations have to be done jointly. They 14 cannot be, as possible under some meanings of the word 15 jointly, done separately, independently or successively. 16 And in the reasons for allowance, the examiner 17 pointed this out. The PTO understood the claimed invention 18 was directed at, quote, application jointly of either 19 vertical and horizontal interpolation filtering and 20 resampling to respective single filters in either vertical 21 or horizontal applications. 22 So he relied on the argument and on the 23 amendment, and he even used our words "respective filters" 24 in there to come to that conclusion. 25 So again, in conclusion, your Honor, jointly is
Page 131 1 end, that says there's -- no -- resample version is stored. 2 But in spite of all of that, slide 25, the April 3 18, 2018 office action, page 5, relies on Robertson. It 4 has components that do vertical and horizontal resampling, 5 and those -- and the output of those sampling components 6 goes straight to motion compensation. And the examiner 7 says that teaches your equation, that teaches the 8 relationship, that teaches no buffering, it teaches the 9 combination. 10 So the rejection came after the amendment, even 11 though the claims required a single group filter, required 12 composition, and required no resampled version be stored. 13 All right. What did the examiner say? It would 14 have been obvious to ordinary skill in the art, he's 15 combining it with a reference called Ye and Tsai. With the 16 resampling used with motion compensation of Robertson, 17 okay. 18 So Robertson has resampling used with motion 19 compensation. So the issue is, is that jointly performing 20 sampling and motion compensation? 21 All right. So this rejection shows the examiner 22 did not think the equations or single filter overcame the 23 prior art. And in response, we get this amendment. 24 Applicants amended the claim, they add "MCIFV 25 and SCFV being applied jointly." And the bottom part of	Page 133 1 an ambiguous term just in ordinary language. When you read 2 this patent, it's pretty clear what it means. Purpose of 3 the invention, the claim language, the specification, the 4 amendment, all indicate when you're performing motion 5 compensation and sampling and you're doing it jointly, you 6 have to group them together in a single operation. That's 7 what they said was the invention, that's how they 8 distinguished the prior art, that's what everything -- 9 every characterization of the invention is consistent with. 10 With that, I'll close unless you have questions. 11 JUDGE BHATTACHARYYA: Thank you. I do have some 12 questions, but I would like to take our lunch break first. 13 So let's take a break for one hour. 14 MR. ANZALONE: Thank you. 15 (Whereupon, at 1:07 p.m., the hearing was recessed, 16 to be reconvened at 2:07 p.m. this same day.) 17 18 19 20 21 22 23 24 25

Page 134 1 AFTERNOON SESSION (2:07 p.m.) 2 JUDGE BHATTACHARYYA: Yes, Mr. Anzalone, I have 3 some follow-up questions for you. 4 MR. ANZALONE: I hope you don't have hard 5 questions for me. 6 JUDGE BHATTACHARYYA: So first of all, your 7 construction is respective filters are grouped together in 8 a single filter operation. 9 So I'm trying to understand what you mean by a 10 single filter operation. 11 MR. ANZALONE: Sure. 12 JUDGE BHATTACHARYYA: And I guess two aspects 13 that jumped out at me during your presentation was one, you 14 believe that a single filter operation excludes successive 15 operations; is that correct? 16 MR. ANZALONE: Exactly. 17 JUDGE BHATTACHARYYA: So you would say it's a 18 nonsuccessive operation; is that true? 19 MR. ANZALONE: How comfortable are you with 20 math? 21 JUDGE BHATTACHARYYA: Well, I don't know. Try 22 me. 23 MR. ANZALONE: All right. So I am going to, in 24 slide 9, I am going to do a single filter operation to 25 predict current block, where that bird is going to be. And	Page 136 1 make a result Z, which is Y plus 2. So whenever I see a 2 pixel value, I'm going to add 2 to the brightness for some 3 reason. 4 So I've got one operation Z equals Y plus 2, 5 another operation Y equals X1 plus X2 plus X3. 6 So what the inventor said was, hey, I know what 7 the equation for Y1, the motion compensation, I now know 8 what the subsampling equation is, Z. Do them as one 9 composed filter operation. 10 So I'm going to -- I'm not going to calculate Y. 11 I'm going to say Z equals 2 plus X1 plus X2 plus X3. I 12 have a combined single filter operation, all right. 13 JUDGE BHATTACHARYYA: Okay. 14 MR. ANZALONE: Okay. So, I mean, think of, you 15 know, in simple terms, you know, if you know you're going 16 to multiply something by 5 and then you're going to 17 multiply it by 20, just multiply it by 100 and save 18 yourself some work. 19 And the other -- and the benefit of that, which 20 the inventor points out, if first I multiply it by 5, then 21 I'm storing that result somewhere and I have to then use 22 that and input somewhere else. 23 So basically, I'm taking the two steps and 24 collapsing them into one step. So this would what we would 25 call -- they do this with matrices, right. It would be say
Page 135 1 where it's going to be in a down-sampled smaller version, a 2 thumbnail we'll call it, okay? 3 So on the bottom you have reference images which 4 are full resolution. Top right current image you want to 5 predict where the bird is going to be in a subsampled 6 smaller. 7 Now, the patent talks about previously, you 8 would take your reference images and say reduce them in 9 size, that's one operation, and now to do the motion 10 vector, you'd say, oh, X minus 4, the bird is on the top 11 left, X minus 3 it's moving down to the right, X minus 2, 12 I'm going to calculate a vector, which is a magnitude and a 13 direction, and now I will apply that to my smaller 14 reference image, two operations. 15 Now, mathematically, how I can describe that is 16 let's say I'm going to do a motion compensation first, I'm 17 going to say why is the output of this one filter 18 compensation, I'm going say Y equals, and I'll say the 19 first three, it's going to look at the prior ones and 20 calculate a vector. 21 I'm going to say Y equals X1 plus X2 plus X3. 22 That's one computation, one filter operation that's 23 performing motion compensation. 24 Now I have a separate filter that's going to say 25 I'm going to take something, I'll call it Z, I'm going to	Page 137 1 a 4-by-4 matrix and you're multiplying, and then it's a 2 motion vector, which would be another matrix. 3 What mathematicians know is you can multiply 4 those two matrices together and get a combined matrix that 5 you can just apply once. So you're calculating Y directly 6 from X without ever having to calculate -- you're 7 calculating Z directly from X without ever having to 8 separately calculate Y, the intermediate step. That's what 9 the patent is about. 10 JUDGE BHATTACHARYYA: Okay. How does that 11 relate to the successive versus nonsuccessive point? 12 MR. ANZALONE: Okay. Because in my example, if 13 the two of us were calculating this prediction block and 14 you told me tell me what Y is, okay, I'm going to calculate 15 X1, X2, X3, I think this is the motion vector, I give it to 16 you. 17 Now you're going to add 2 so you can interpolate 18 it. This is successive, right. I've passed off a result 19 to you. 20 Now, if you take the single filter as some 21 component, arbitrarily I can just draw a line around it and 22 say oh, that's all in a single filter. But that's clearly 23 not what the patent is talking about. It's talking about 24 the functions, not drawing a line around something and 25 saying that's a filter, right.

Page 138 1 It's really talking about avoiding a computation 2 step, doing it in a single step, integrating it together, 3 you save buffering, you save computation time. 4 JUDGE BHATTACHARYYA: Okay. So I guess that got 5 to another question. You talked in some of your slides 6 about a single filter and a single filter operation. But I 7 didn't see single filter in your construction. 8 Are you including -- does the words "single 9 filter operation" in your view also require a single 10 filter? 11 MR. ANZALONE: Well, there are two single 12 filters, yes. So let's find the claim. 13 There's a single vertical filter and a single 14 horizontal filter. 15 JUDGE BHATTACHARYYA: It already requires a 16 single filter. 17 MR. ANZALONE: That's the example I gave, I'm 18 passing to you the result. 19 JUDGE BHATTACHARYYA: Okay. 20 MR. ANZALONE: This clearly separates successive 21 versus jointly. So I'm doing those two operations 22 together, I'm not passing off to you, and I'm fixing the 23 lines. 24 Now I say you take care of the columns. 25 JUDGE BHATTACHARYYA: Okay.	Page 140 1 Now I do my second filter operation. What's 2 half of 1? It's still .5, it's 1. 3 So I get one result doing them separately, but 4 now let's say I combine them, you're going to get a better 5 result. I'll show you why. 6 I'm going to say I'm going to do a half times a 7 half, I'm going to do a quarter of the original number. If 8 I do one-quarter of 1, .25, it's below the threshold, I'm 9 going to get zero. 10 So I'm actually getting a different, better 11 result by combining them, and that's just a function of, 12 you know, we have digital systems, quantization. 13 The other issue is if it's a very large number, 14 you'll cut it off, right. So those are the things that are 15 happening. 16 So it is -- it doesn't seem possible, but they 17 can be different results from combining versus doing them 18 successively. 19 JUDGE BHATTACHARYYA: All right. Okay. I guess 20 my concern is I kind of see what you're getting at. I'm 21 concerned that with your construction, we're going to get 22 into a debate about what a single filter operation is and 23 how does adopting your construction provide any advantage 24 over jointly, since we're going to have to debate what that 25 means.
Page 139 1 MR. ANZALONE: Doing that independently, 2 successively, separately. 3 So the patent is clearly saying you don't do 4 that when you're doing motion compensation or sampling 5 conversion. You have to do those together. 6 JUDGE BHATTACHARYYA: All right. And also it 7 seems like, I mean, for any composite math equation, you 8 could potentially split it into individual equations that 9 are being combined, or it seems possible that in some 10 circumstances -- is there going to be debate over whether 11 something is a single operation under your view or if it's 12 multiple operations? 13 MR. ANZALONE: Well, there are some 14 complications. This is a digital system, so once you do 15 that, you're going to have things such as clipping, 16 quantization, and precision. 17 So I'll give you an example. I don't think this 18 is -- this is just explanation. 19 All right. I'm going to -- so you know these 20 are digital systems that can be only a one or a zero. 21 Let's say my two equations are X equals a half -- Y equals 22 half of X and now Z equals a half of Y, all right? Okay? 23 And let's say the value is 1. 24 My first filter operation, say what's half of 1. 25 It's .5. That equals 1.	Page 141 1 MR. ANZALONE: Sure. Because what they will 2 have to point to is an operation which is both taking the 3 original input and sampling it and motion compensating it, 4 taking both of those things into account and not doing it 5 separately. 6 So the example I gave, you know, if there's -- 7 if they're separately adding the example I gave Z equals Y 8 plus 2. If you see somewhere else they're doing that 9 separately, then it's not a single filter operation, it's 10 two filter operations. 11 And, again, how this will be done in a matrix, 12 let's say it's an 8-by-8 matrix, you'll have a coefficient 13 for your first step, and then you'll have different 14 coefficients for your second step. 15 Well, what will happen in this case is you will 16 convolve or multiply, depending on time domain frequency, 17 you'll operate them together and you'll have a single 18 matrix that takes that all into account. 19 Now, that's how I would do it, but my 20 imagination is limited, there may be other ways to do it, 21 and I can tell you things are possible now that I didn't 22 think were possible years ago. 23 But the way I would do it would be take -- 24 combine the two matrices and do directly from your input 25 and get your output, so you're not doing motion

Page 142 1 compensation and sampling separately, you're doing them 2 jointly. 3 That's -- mathematically, that is possible, you 4 can do that. 5 JUDGE BHATTACHARYYA: Okay. One item that 6 Mr. Ligotti brought up in his presentation was some sort -- 7 some portion of the spec, and he wasn't sure whether you 8 viewed that as being included under your construction. 9 MR. ANZALONE: Sure. 10 JUDGE BHATTACHARYYA: Do you remember what 11 that -- I don't remember exactly what portion of the spec 12 that was. 13 MR. ANZALONE: Sure. I actually do remember. 14 JUDGE BHATTACHARYYA: Okay. 15 MR. ANZALONE: Even after lunch. 16 He was pointing to parts of the spec -- well, if 17 you look at the patentee and the inventor, they're pretty 18 careful in column 3 to 4, they say "figures 6 to 9 and 12 19 to 13 are according to the invention." So that's the 20 invention. 21 They describe figures 3 to 5 and 10 to 11 as 22 techniques or variants. So they are techniques or variants 23 that are not necessarily claimed, and it happens all the 24 time in patents that we show things that are not claimed. 25 Now, to answer your specific question, I would	Page 144 1 But your Honor's other question really hit on 2 exactly what I was going to say from the start, which is 3 that Respondents' construction is supported by pointing to 4 all these phrases and language in the intrinsic record, but 5 then it deviates from it. 6 So, for instance, they had pointed to language 7 in the intrinsic record saying grouped into a single 8 filter, but their construction, as you noted, is grouped 9 together in a single filter operation. 10 Now, from our perspective, we agree these 11 changes seem minor. I'm not really sure what they're 12 trying to read out or change in terms of scope with single 13 filter operation compared to single filter. 14 But Respondent is arguing so emphatically and so 15 confident that the words must change that that creates 16 concerns from our perspective as to what exactly is being 17 changed and why. 18 Because, as you heard in Respondents' 19 presentation, they understand what these claims are 20 directed to. In fact, Mr. Anzalone said at the end, when 21 you read this patent, it is pretty clear what jointly 22 means, so there is no need to construe this term. 23 Now, your Honor is very perceptive, we're going 24 to have a fight about whether or not the infringing 25 implementation performs the operations jointly, that is
Page 143 1 need more information. But, for instance, if you use the 2 technique or variant shown in that figure while doing 3 motion compensation and while doing sampling, then it would 4 be covered. 5 I don't want to commit myself to an answer, you 6 know, standing here now. But they would have to show that 7 that specific technique, which is not described as part of 8 the invention and is described as a variant, if they show 9 that that's being done while you're doing the other 10 technique in that same operation, then yeah, it's covered. 11 And I'm sure there's ways to do that, do both. 12 JUDGE BHATTACHARYYA: Okay. 13 MR. ANZALONE: But don't ask me to figure that 14 one out. 15 JUDGE BHATTACHARYYA: All right. Thank you. 16 MR. ANZALONE: All right. Those were hard 17 questions, by the way. 18 MR. LIGOTTI: Just a few points, your Honor. 19 So first, with respect to the question that you 20 just asked Counsel, I had pointed to figure 7 and column 6, 21 lines 16 through 34, which I think Counsel just 22 acknowledged is part of the description of the invention, 23 so that's again figure 7 and the corresponding description 24 is what I had pointed to that I'm concerned they might be 25 reading out with this construction.	Page 145 1 going to be a fight, I suspect, that it seems like 2 Respondents are going to say that the AV1 implementation 3 for some reason doesn't perform resampling and motion 4 compensation interpolation jointly. But that's what the 5 claim says, and that's what that fight is going to be 6 about. 7 Changing the claim language to single filter 8 operation only invites ambiguity, and it's going to lead to 9 the same fight about whether or not that is satisfied. 10 So it just seems like an exercise in construing 11 the claim for the sake of construing the claim. 12 Just to sort of drive the point home a little 13 bit, you know, this is a slide RDX-M5.17 where multiple 14 times, the Respondents recognized that it's -- in the 15 invention, there's two operations in a single filter. Now, 16 they added "and single filter operation," but the quotes 17 below don't say that. They say the operations of these 18 functions are combined or performed conjointly by applying 19 an interpolation filter. It's one filter that does two 20 things. 21 And I think Respondents are also going to argue 22 that there needs to be -- in order to show infringement, 23 you have to show the combined filter and then the 24 underlying two filters. That's not what this invention is 25 directed to. It's directed to one filter, a horizontal

Page 146 1 filter and a vertical filter, each of those is a single 2 filter that does two things, two operations. 3 That's what the claim language says on its face, 4 that's what the specification says, that's what 5 Respondents' own presentation acknowledges. So there is 6 from our perspective to need to construe the claim term. 7 JUDGE BHATTACHARYYA: Thank you. 8 MR. LIGOTTI: Does your Honor have any 9 questions? 10 JUDGE BHATTACHARYYA: Yes. Do you -- so there 11 was some discussion in Respondents' presentation about the 12 prosecution history and the distinction over Robertson, I 13 think. 14 Do you feel like that a distinction has 15 implications for the meaning of jointly? 16 MR. LIGOTTI: No, your Honor, I do not. 17 If we were trying to read out being applied 18 jointly from the claim, then there would be some merit to 19 this argument that it was added to address the prior art. 20 But our position is that the claim, including 21 being applied jointly, is sufficiently understandable on 22 its face and does not need construction. That was added 23 during prosecution. We are saying that that is a claim 24 element that is -- instructs the meaning of this claim term 25 that everybody understands.	Page 148 1 The patented invention in the '877 patent uses a 2 single GF filter, either vertical or horizontal, that 3 performs resampling and motion compensation jointly. And 4 so there is not that resampled version that existed in the 5 middle, thereby saving the memory and so on. 6 And so that helps distinguish these usage of the 7 terms "successive" versus "jointly." 8 JUDGE BHATTACHARYYA: Okay. But within the 9 filter, does jointly preclude successive motion 10 compensation and resampling? So within -- assuming that 11 these two operations are happening in a single filter, is 12 it your view that the "jointly" language means that those 13 two operations occur nonsuccessively? 14 MR. LIGOTTI: I do not believe that the 15 "jointly" language would include two separate filters being 16 applied one after -- 17 JUDGE BHATTACHARYYA: No, within one filter. So 18 we have two operations happening in one filter, the 19 resampling and the motion compensation; right? 20 MR. LIGOTTI: That's correct. 21 JUDGE BHATTACHARYYA: Okay. And so does the 22 "jointly" language permit those two operations within a 23 single filter to occur successively, or do they need to 24 occur nonsuccessively? 25 MR. LIGOTTI: So I want to be a little careful
Page 147 1 So I have no issue with that. 2 JUDGE BHATTACHARYYA: Okay. And then regarding 3 the successive, the distinction between single -- between 4 jointly and successive, do you see any -- do you see that 5 there is a distinction between the two? 6 MR. LIGOTTI: Certainly in the context of, you 7 know, for instance -- so yes, there is a distinction 8 between the two, to be clear. 9 You know, and for instance, the claim requires 10 the successive application of the claimed GFVH and then 11 GFV, or vice versa. So that's one after another. 12 But each of those filters themselves jointly 13 perform the operations of resampling and motion 14 compensation interpolation. So in that sense, yes. 15 Just to be very clear, if we pull up 16 Complainant's slide 94, and this is a quote from 17 Respondents' opening brief at page 25 to 26, the difference 18 is that in that successive approach, there's something in 19 the middle. 20 As Respondents acknowledge, in the prior art 21 that first SCF filtering operation in the prior art 22 generates a resampled reference image stored in the decoded 23 picture buffer, and then motion compensation later operates 24 on that image with yet another filter. That's the prior 25 art.	Page 149 1 about the construction of hardware and how these things 2 actually work in practice. 3 But the "jointly" language means that the single 4 filter is doing the operations of resampling and motion 5 compensation interpolation jointly in the same filtering 6 operation, so to speak, right. 7 The idea is that even if it is multiple lines of 8 code that comprise the single filter, it is performing the 9 underlying operations of resampling and motion compensation 10 at the same time jointly. They are performed together. 11 And so, you know, Respondents had put in their 12 opening brief at page 28 that their construction did not 13 require particular coefficients, hardware, simultaneous 14 execution, one processor instruction, one signal pass, or 15 one combined horizontal and vertical filter. 16 That's the reason for my hesitation, is that I 17 agree with that. There are many ways to construct a 18 filter, and so there's a little bit of, you know, how a 19 particular filter is constructed will determine whether or 20 not it is applying the operations jointly, and that's what 21 expert witnesses in this case are going to offer opinions 22 on. 23 But putting that aside, like the particulars of 24 how a filter is constructed, a single filter needs to do 25 these two operations as that single filter, right.

Page 150 1 JUDGE BHATTACHARYYA: Okay. 2 MR. LIGOTTI: It needs to perform those two 3 operations jointly. 4 JUDGE BHATTACHARYYA: Thank you. 5 Anything further? 6 MR. ANZALONE: I hate to violently agree with 7 opposing counsel on things. I think he said that the 8 filter is doing the operations jointly of sampling 9 conversion and motion compensation, then it's a single 10 filter. Yeah. 11 Now, the issue is what does jointly mean? It 12 can't be doing them separately or independently. If they 13 are doing them separately and independently and you draw a 14 box around it, I'm going to say the disagreement here is 15 I'm not going to let you draw a box around it and say 16 that's a single filter. Those are separate filters and 17 separate filtering operations. 18 And, again, we're not changing the claim 19 language here at all. We're interpreting jointly, because 20 as you can see, the argument here, we're disagreeing about 21 what that ordinary meaning is. And I'm still waiting for 22 them to confirm it doesn't mean separately or 23 independently. We want to rule that out as a possible 24 meaning of jointly. And that's all I have. 25 JUDGE BHATTACHARYYA: Okay. Thank you.	Page 152 1 here at issue, it appears in both independent claims 2 asserted, claims 1 and 3. The term is "depends on the 3 shape of the current subblock." 4 As with every term in this case, Complainants 5 have taken the position plain and ordinary meaning without 6 any further explanation of what that means, other than to 7 say they disagree with what we say it means. 8 We have proposed what I will confess is a rather 9 wordy definition, which I hope will become clear from my 10 explanation as to why it is so wordy. It's not intended to 11 complicate things, in fact it is intended to simplify 12 things. And hopefully that will come about. 13 This particular patent, your Honor, deals with 14 decoding a particular block. And as part of that decoding 15 process, you have to look at all the blocks around the 16 block you're decoding, okay, to get the context of the 17 block that's being decoded. 18 And this patent goes to how do I figure out 19 which of those blocks around I want to look at to get these 20 coefficients, to get these new values, how do I determine 21 which specific blocks I'm going to look at to determine the 22 context of the block that's being decoded. 23 The specific language reads "depends on the 24 shape of the current subblock." What we want to show here 25 is that has to do with the specific what we'll call shape.
Page 151 1 Are we ready for the next term? 2 MR. MC PHAIL: My name is Don McPhail from 3 Vanguard Crest. I represent the TCL Respondents in this 4 investigation. Before I get into -- I'm going to not know 5 who I'm pointing out here. Good, I got it. 6 Before I get into the substance of this '962, 7 there was reference made earlier to an IPR that TCL has 8 filed on the '877 patent, and the fact that in that IPR, we 9 said there was no need to construe any of the claims. 10 Just to clarify for your Honor, that IPR was 11 filed as a copy cat. Amazon had already filed an IPR on 12 the same patent and we filed what is called a copy cat with 13 a petition or motion to join their IPR as a follow-on. 14 Therefore, our IPR petition had to be identical 15 to Amazon's. Whether we thought there was a claim term 16 that required construction or not, Amazon had taken the 17 position that no term required construction. We had to 18 take that same position to be a copy cat IPR. And that's 19 why we took it. It should not be reflective of what we 20 believe here about the '877 patent. You've heard our 21 arguments, you've heard our reasoning there. 22 The fact that we took a particular position at 23 the IPR was solely because we were filing a copy cat 24 petition, not a new petition on its own. 25 Now, the '962 patent. We have only one term	Page 153 1 We've said geometric shape. 2 What we mean by that is rectangle, square, real 3 shapes as opposed to some abstract concept. And the reason 4 we do that is because of how the patent itself talks about 5 it. 6 This particular embodiment is disclosed in 7 column 12 and pictured in claims -- sorry, figures 13 and 8 14. Figure 13 illustrates the horizontal rectangle, the 9 vertical rectangle ideas, and the language from the spec 10 makes it very clear that the selection of the coefficients 11 may depend on the block's shape. More specifically in this 12 case the dimensions of the block. 13 And now maybe we would have been better in our 14 proposed construction to have used the word "dimensions" as 15 opposed to geometric shape. But the idea is the same, that 16 it is a physical shape such as a rectangle or square that 17 we're looking at in order to determine which of the pixels 18 or which of the other blocks we want to consider here for 19 our process, right. 20 And it's also disclosed in figure 14 in the 21 flowchart. Here's how it means to determine, right. We're 22 coming down, we're calculating these sig values, and we get 23 to a point where all of a sudden we ask is the transition 24 block a rectangle? Yes or no. That's a shape. Pure and 25 simple, that's a shape. And that's what it uses then to

Page 154 1 determine whether it goes to the right in the flowchart or 2 whether it goes down. It's a direct aspect of which 3 calculation we follow, what is the geometric shape of the 4 transition block. 5 That seems quite clear, right, and that's what 6 we mean by "determined by." The shape of the block is 7 what's factored into, it's what determines the calculations 8 that you're going to do. 9 Now, there's another way of doing this. Let me 10 just really quickly, if I could, your Honor, just go to the 11 patent itself. All right. I'm not going to be able to get 12 it. Apologies. Sadly, I'm not quite as technically 13 proficient as I'd like to be. All right. 14 I've been telling you, right, the embodiment 15 we're talking about here refers to shapes, the right, 16 rectangle, width, height, figures 13 and 14. There's 17 another way disclosed in the spec too, it's called the scan 18 order. 19 This particular embodiment, using the shape, 20 shows up particularly in column 12 to start with, and it 21 talks about this is how you can figure out which ones to 22 look at. 23 Then in column 13, it gives us a different way 24 to do it. It's the scan order. It talks about it being an 25 alternative. It is not the same as dependent upon shape.	Page 156 1 They're clearly two different things. 2 If scan order and shape were the same thing, 3 claims 5 and 17 are meaningless, right. It's just -- it's 4 gibberish. It doesn't make any sense to say it further 5 depends on the same thing it already depends on. 6 Scan order and shape are not the same thing. 7 But that is what it appears the Complainant wants to do by 8 just arguing plain and ordinary meaning. That's the 9 dispute between the parties here, does this depend on scan 10 order or does it depend on the geometric shape of the 11 block. That's the question. 12 They want it to depend on scan order, and 13 they're going to argue that there's some sort of 14 correlation between scan order and the shape of the block. 15 I don't know what it is. That will be for their expert 16 later, I'm assuming, if you give them the construction they 17 want. But that's what they're trying to get here. 18 They're trying to get the depends upon the shape 19 means scan order. And we say that 5 and 17 mean for sure 20 it cannot be the same, right. Shape is one thing, scan 21 order is another. 22 They can both be used, and in fact that's what 5 23 and 17 are saying. Don't just use one of them; use both of 24 them, and you'll do an even better job then, right. 25 You can look at it in terms of the shape of the
Page 155 1 It's scan order. 2 Scan order is something completely different 3 from shape. Scan order, and here's figure 16. It appears 4 in figures 15 and 16. But here you can see from the 5 flowchart when you're looking at scan order, it matters 6 whether it's a diagonal or horizontal scan. Doesn't matter 7 whether it's a horizontal or square or horizontal rectangle 8 or vertical rectangle. This has nothing to do with shape. 9 This has to do with the sequence in which you 10 choose them. Do I start and I go clockwise, one, two, 11 three, four, five? Do I go one, two, three four? That's 12 scan order. It has nothing to do with the actual shape of 13 the block. It has to do with numerical sequence. 14 The column makes it clear in column 13 of the 15 spec, this is different, this is an alternative way of 16 determining the issue here, right. 17 Scan order is separate than dependent upon the 18 shape, okay. And it becomes very clear when you look at 19 the dependent claims, and I'll point particularly to claims 20 5 and 17. 5 depends from claim 1, 17 depends from 21 claim 13. 22 Both of those claims talk about it depending 23 further depends on a scan order. So it depends on the 24 shape, and it further depends on a scan order. There's no 25 way scan order and shape can be the same thing, right.	Page 157 1 block, you can also look at it in terms of the scan order, 2 and you can put those together to come up with an even 3 better prediction. 4 But it doesn't mean that scan order is the same 5 as shape. It doesn't mean that scan order depends on the 6 shape. 7 As I say, the spec makes it very clear that 8 these are two different things. They're not, in fact, the 9 same. And so you may not like our particular language here 10 that we've tried to use to describe this, maybe you can 11 come up with something better. 12 But I think the key here has to be that 13 dependent upon shape does not mean dependent upon the scan 14 order. It does not involve the scan order at all. That's 15 a distinct concept. The spec makes it clear, the claims 16 make it clear. They shouldn't be able to argue plain and 17 ordinary meaning to blur those two lines together. 18 Any questions? 19 JUDGE BHATTACHARYYA: Is there some issue with 20 what "determined by" means in terms of the level of 21 correlation that -- 22 MR. MC PHAIL: It does not have to be, as they 23 argue, a direct one to one limited. As we say, it doesn't 24 have to be limited. It can involve both the shape and the 25 scan order.

Page 158 1 But the shape has to be a part of it. 2 You saw that in the flowchart. As you're making 3 the calculations, there has to be a question about is this 4 a rectangle or not, is it a horizontal rectangle or 5 vertical rectangle. That's in the flowchart. That's the 6 shape. That's when it is using the shape to figure out 7 what calculations to make. 8 Conversely, figure 16 shows you the flowchart 9 with a scan order, completely different consideration. 10 Doesn't care whether it's a rectangle or not. It only 11 cares about whether it was a diagonal scan or a horizontal 12 scan. Different concepts. 13 JUDGE BHATTACHARYYA: Okay. Thank you. 14 MR. MC PHAIL: Thank you. 15 MR. TSUI: Good afternoon, your Honor. Nick 16 Tsui again. I confess, I'm a little confused as to what I 17 just heard from Respondents' counsel here. I'm not sure if 18 that means their construction that they have previously 19 offered is now not what they're offering. If the dispute 20 is whether scan order and shape are the same thing, I'm 21 happy to tell you that it's not, that's not going to be our 22 position, that's not our position. I don't think that it 23 makes any sense to say they're the same thing. If that's 24 all we need to do to end the dispute and they're 25 withdrawing their claim construction and they just want to	Page 160 1 the term that's in dispute is "depends on the shape of the 2 current sub-block." 3 Now, "of the current sub-block" isn't the 4 problem here. The problem is "depends on a shape." 5 Now, those are just simple, plain English words. 6 As the Federal Circuit says that commonly-used terms, each 7 is used in common parlance, there's no reason to construe 8 those terms. 9 What the Respondents want to do here is they 10 want to change "depends on" to "determined by" and they 11 want to change "shape" to "geometric shape," all while 12 saying that's plain meaning, not lexicography, not basing 13 it on disclaimer, they just want to say that's plain 14 meaning. 15 The evidence and law do not support such a 16 construction. 17 And then there is this parenthetical. I don't 18 really know if that's meant to be part of the construction 19 or not. I think this is exactly the kind of fact-specific 20 line drawing that was rejected in 1461. I also think the 21 mere fact that Respondents' construction needs a 26-word 22 parenthetical to explain what they think their construction 23 means shows how unhelpful and confusing the construction 24 actually is. And I think it should be rejected for that 25 reason as well.
Page 159 1 say they want to be clear that that's not the same thing, 2 then I would that would resolve the issue. 3 But if they're maintaining their construction, 4 I'm happy to go through and explain why I think all that is 5 wrong. 6 JUDGE BHATTACHARYYA: Could you explain why you 7 think what you understood their construction to be is 8 wrong? 9 MR. TSUI: Sure, of course, yeah. 10 Your Honor, I think this is just another term, 11 like a lot of terms we've seen today, where these are just 12 simple, plain English words, that everyone knows what they 13 mean. Everyone I think knows what "depends on a shape" 14 means. 15 What Respondents are trying to do here is 16 rewrite the claims so that they can take normal, easy words 17 to understand and use narrower language, add limitations, 18 extra words, so that they can read out embodiments that are 19 in the claims and in the specifications. I don't know 20 based on what I just heard if that's what's happening, but 21 to me the construction they have asked for, that's what 22 it's doing. 23 And I think for that reason, that construction 24 should be rejected. 25 So if we could go to slide 134. So, your Honor,	Page 161 1 But I'll address each of these underlying claim 2 rewrites in turn, because I think they are different. 3 So first, "depends on" and "determined by." 4 That is just an improper rewriting of the claim. The claim 5 itself uses "determined" twice in other places. If the 6 patentee wanted to use "determined" a third time, they 7 could have done that. Instead, they said "depends on." 8 The Federal Circuit has said that use of both 9 terms in close proximity in the same claim gives rise to an 10 inference, that there's different meaning should be 11 assigned to each. 12 More importantly, the Respondents' own brief 13 explains why their construction is wrong. This is a little 14 different than what we just heard a moment ago, but 15 Respondents in their brief said "a dependence that holds 16 regardless of another variable is a dependence on the shape 17 itself." Regardless. 18 Dependent claim 5 which we heard about says 19 "wherein it further depends on a scan order." Claim 5 20 cannot satisfy further depends on a scan order if 21 independent claim 1 already required that dependence on the 22 shape holds regardless of another variable. 23 Respondents' construction here makes dependent 24 claim 5 impossible because it would have to undo a 25 limitation of the independent claim, which you can't do.

Page 162 1 Claim 1 in fact has to allow other variables. And I think 2 that's what Respondents' counsel wasn't saying anything 3 today that was different than that, saying that you've got 4 to have a certain dependency in claim 1 and you can add a 5 dependency in claim 5. So the way that the dependent 6 claims will work is that claim 1 had to have been broad 7 enough to allow that in the first place. It cannot 8 disallow other dependencies only to then re-bring that in 9 in a dependent claim. 10 So again the way that Respondents' construction 11 was originally written, I think it has to be rejected for 12 this reason. 13 Respondents' construction should also be 14 rejected in view of the specification. Here what the 15 specification said is the shape of the transport block, 16 width and height of a rectangular transport block, are 17 taken into consideration in determining the local template. 18 Now, we didn't get into this with the particular 19 slides today. I don't think counsel necessarily talked 20 about this. But what's in the slide is the geometry must 21 determine the relative position, even when other inputs 22 also matter. The geometry must determine. That's not what 23 the specification says. In fact, that's the opposite of 24 what the specification says. 25 The specification says the shape is taken into	Page 164 1 transformed coefficients is fixed and independent of the 2 shape of the block. That was what the prior art 3 distinction was. Fixed and independent. 4 That doesn't say anything about determined by 5 the shape of the block. It just has to be fixed and not 6 independent. 7 And the examiner's statements are consistent 8 with that. The examiner said "can be optimized for the 9 particular shape." Didn't say anything about how it had to 10 be determined by the shape. 11 Rewriting depends to determined is not 12 consistent with the way that the patent is explained in the 13 claims and the specification or in the prosecution history. 14 Now, to the second part of Respondents' 15 construction, Respondents want to add the word "geometric" 16 to the common everyday word "shape." I don't think there's 17 any serious dispute that everyone knows what a shape is. 18 In the parenthetical Respondents used the word "shape" four 19 times without needing to specify whether it was geometric 20 or not. 21 I think all the Respondents are trying to do 22 here is limit what the actual term "shape" is to whatever 23 they think a geometric shape is. And I don't think there's 24 any support to honestly do that. I don't think we saw any 25 support to do that from Respondents just now.
Page 163 1 consideration in determining. So Respondents' construction 2 here is not clarifying the meaning of the term, your Honor; 3 it's changing it. It's narrowing "depends on" to 4 "determined by." 5 So this is like if my kids say they want to eat 6 McDonald's for lunch, I'll take that into consideration, 7 and my determination will depend on what they say. 8 But I am not going to choose -- it's not going 9 to be determined based on what my kids say, whereas if my 10 wife says she wants to eat something, that will determine 11 what we eat. There's no depends there. 12 These are very different terms. This is not 13 swapping out one word for a clearer word. These are 14 changing the meaning of the terms to the exclusion of 15 preferred embodiments like the one shown on the slide. 16 Specification also says the local template is 17 adapted to the shape of the block. Doesn't say "determined 18 by." These are exemplary embodiments in the specification 19 that Respondents' construction as they have advocated for 20 in the briefing reads out, which should be rejected. 21 Now, during the prosecution history, we see 22 again the Respondents' construction as written is not 23 supported. During prosecution, when the applicants added 24 "depends on the shape of the block," what they said was 25 that the prior art Zhang, the position of each of the	Page 165 1 JUDGE BHATTACHARYYA: But right now, you're not 2 aware of a shape that's not a geometric shape; is that 3 correct? 4 MR. TSUI: Well, I would turn to this example 5 that the Federal Circuit said, that it's a little bit easy 6 here, because I think I know what a steel baffle is, 7 actually I don't know what a baffle is, but what the 8 Federal Circuit says is if I've got a claim term called a 9 steel baffle, then it strongly implies if I just say a 10 baffle, it's not necessarily made of steel. 11 And so in this case, I think it's similar. If I 12 just say "shape," I think it is strongly implied that it's 13 not limited to a geometric shape. I don't know what the 14 term "geometric shape" is meant to limit, but I don't see 15 how a shape would always be a geometric shape, just as a 16 matter of language. 17 JUDGE BHATTACHARYYA: Well, can you think of a 18 shape that's not a geometric shape? 19 MR. TSUI: I can give you an example of a shape 20 that I don't know what the geometry is. 21 JUDGE BHATTACHARYYA: Okay. 22 MR. TSUI: If we go to slide, and this is 23 actually in the patent, if we go to slide 132, please. 24 So slide 132, that's a shape. That's an example 25 from the patent that says that's a shape. I do not know

Page 166 1 the geometry of that shape. I don't know how to describe 2 it in geometrical terms, I'm not sure if I did describe it 3 that everyone would agree with me that's a geometric shape. 4 I think we talked about yesterday that maybe it's an upside 5 down staircase. 6 But that's clearly a shape. Whatever 7 distinction that a geometric shape is meant to include, if 8 it excludes that, that's wrong. 9 Now, if we go to slide 144, please, and again, 10 your Honor, I don't want to set up a straw man just to 11 knock it down, but this was what was in Respondents' brief 12 so this was what their position was at some point, that 13 dimensions of the block, width and height, these are 14 examples that are in the specification as to example 15 embodiments of shape. 16 What Respondents said in their brief was that 17 those are geometric descriptions of shape. It's not at all 18 clear to me what that means. Is that different than a 19 geometric shape? Are there other things called geometric 20 descriptions of shape? Are they in the claim? Are they 21 out of the claim? Why can't we just say shape. 22 The purpose of claim construction, your Honor, 23 is to clarify the meaning of the terms. I don't have -- 24 this is the opposite of clarifying to me. It takes a word 25 that I think I felt pretty good about understanding and now	Page 168 1 So the part that I have highlighted here, just 2 before it, "depends on the shape of the current sub-block." 3 Depends on the shape is the term that we're arguing about 4 what it means. 5 The examiner asked the question about geometric 6 dependence, and the response was to add all this resulting 7 partitioning. It had nothing to do with the term that 8 we're actually construing today. It was an entirely 9 different distinction. It was amendments that were added 10 about partitioning the samples. And that's why the 11 examiner's rejections were moot as opposed to traversed, 12 because I'm going to give you some example or explanation 13 for why the question was wrong or the question was 14 answered. That's what happened in the prosecution history. 15 So in sum, your Honor, I think "depends on the 16 shape" is just a commonly-used term. These are normal, 17 plain English words that I think everybody really 18 understands what they mean, and there's just no reason to 19 try to overcomplicate this, other than to narrow the claims 20 to exclude preferred embodiments of the specification, 21 which is improper. Otherwise, there is no reason to 22 construe beyond just the plain English simple words that 23 they are. 24 JUDGE BHATTACHARYYA: Thank you. 25 MR. MC PHAIL: Just a couple of points, your
Page 167 1 I'm not sure what is meant anymore. 2 The prosecution history, that is something that 3 Respondents again pointed to in their brief. There was a 4 portion of the prosecution history where the examiner asked 5 what specific geometric dependence do applicants use? 6 Examiner asked that. 7 The applicants' response, I've highlighted here, 8 had nothing to do with geometry. They never used those 9 words. The words "geometric shape" also never appeared in 10 any claim, don't appear anywhere in the specification. 11 The applicant's response here was to talk about 12 partitioning of the current block of samples and the 13 applicant said in the prior art, there are blocks of 14 transformed coefficients, not blocks of samples. I didn't 15 get a chance to go through the background and tell you what 16 the difference between those two things are, but the point 17 here is the distinction that was being made had nothing to 18 do with geometric dependence. 19 What the applicant said was the examiner's 20 rejections are moot. They weren't traversed, they're moot, 21 because they weren't addressing the question that the 22 examiner had. 23 What they did is they actually added more 24 language to the claim. If we could blow up the bottom 25 left, please.	Page 169 1 Honor. 2 First of all, figure 12 which Counsel showed, in 3 mathematics, that's referred to as a staircase polygon. It 4 is in fact a geometric shape. 5 JUDGE BHATTACHARYYA: All right. 6 MR. MC PHAIL: And I think quite frankly all 7 shapes are geometric. I think if they're going to take the 8 position that there's a shape that's not a geometric, we've 9 got a huge 112 problem here, because what exactly is that, 10 is that shape that's not a geometric shape. I don't think 11 it's defined in their spec at all. I don't think a POSITA 12 would have any idea what it is. 13 Right, a shape -- normal meaning of shape is 14 geometric. 15 Again, our purpose here was to try and make it 16 clear that they cannot rely solely on scan order to satisfy 17 this limitation. It has to do with something about the 18 dimensions of the blocks, the size of the blocks. All of 19 these things go to geometry, right, length and width. 20 That's squares, rectangles, polygons. It connotes a 21 geometric shape. 22 JUDGE BHATTACHARYYA: So I think we heard from 23 Complainant's counsel that they're not trying to argue that 24 scan order is shape. With that representation, are you 25 still -- do you still want to include the word "geometric"

Page 170 1 in your construction? 2 MR. MC PHAIL: I would like to talk with 3 co-counsel about that, but I think we could probably come 4 to an agreement. 5 If they're willing to concede that scan order 6 alone will not satisfy this limitation, then we may have an 7 agreement. 8 JUDGE BHATTACHARYYA: All right. And then with 9 respect to the "depends on" versus "determined by," is 10 there -- what work is being done by the "determined by" 11 language in your proposal? 12 MR. MC PHAIL: Depends upon has the ability, at 13 least from how we've read their infringement contentions, 14 to be interpreted very, very broadly and not necessarily 15 involve a direct relationship. 16 Again, I don't want to make it tied too 17 specifically that A must lead to B. But I think you saw 18 from the flowcharts that the shape, whether it's a 19 rectangle, whether it's wider than it is tall, matters, 20 right. So that's part of the determination. That's what 21 we meant when we said "depends upon." 22 Not just that there's some correlation between 23 as there might be scan order and the fact that the block 24 has a shape, right. There's a loose correlation there, but 25 one does not depend on the other. The scan order has	Page 172 1 our wires got crossed on that, but we take the position 2 that those are the same things. 3 The last little thing there Respondents' counsel 4 said I do not agree with that, in the sense that he said 5 you can't have a combination with shape dependency with any 6 other dependency in claim 1. That can't be the case. You 7 can't have a dependent claim that claims the very thing 8 that claim 1 can't have. That's not possible. If claim 1 9 says I can be dependent on two things, claim 1 has to allow 10 that. It cannot be the case where claim 1 disallows what a 11 dependent claim adds back in. 12 JUDGE BHATTACHARYYA: If the parties can 13 potentially resolve their differences over this claim term 14 in the updated claim chart, that would be great. 15 MR. MC PHAIL: Thank you, your Honor. 16 MR. STEVENS: So I think it's time to move to 17 the next patent. Scott Stevens on behalf of the 18 Complainant. What we've been talking about up to this 19 point today are four patents that talk about encoding and 20 decoding, how you get video from one spot to another. The 21 next two patents are a little bit different. We're now 22 going to talk about the content and what we're going to do 23 with the content to help render it as properly as possible 24 on the TV. 25 When we're talking about just encoding video
Page 171 1 nothing to do with what that shape is. That shape may 2 somehow have an effect on what the scan order turns out to 3 be. 4 But it's not -- determined by is supposed to 5 show that or supposed to connote the idea that this is the 6 factor that plays a role in determining what it is. 7 And sure, scan order can also play a role, but 8 it has to play a role by itself, the shape, not in 9 combination with the scan order, but by itself, just the 10 shape, has to play a role in figuring out which blocks 11 we're supposed to choose to meet that limitation. Thank 12 you. 13 JUDGE BHATTACHARYYA: Thank you. 14 MR. TSUI: Just very quickly, your Honor. 15 If all shapes, and I don't know that I have the 16 geometric chops that opposing counsel has here, but if all 17 shapes are in fact geometric shapes and there's no daylight 18 between those two, I don't even know why we're trying to 19 construe this at all. It seems like that's just accepted. 20 He can't come up with a geometric shape that's not a shape, 21 I can't come up with a geometric shape that's not a shape. 22 Let's just call it shape. 23 Now, as far as is a shape a scan order, if 24 that's going to solve the problem that would be great. I 25 don't think those are the same things. I don't know where	Page 173 1 streams, a lot of times when something is encoded, you 2 don't know what TV is going to be played, it's going to be 3 played on at the end of the day. It might be a 20-year old 4 TV that's not great, might be a brand-new TV that has all 5 the bells and whistles. There's some different 6 technologies that sit on top that allow us to best take the 7 data and to display it on the TV that you have and the way 8 to make it as good as possible, either use the full 9 availabilities of your TV or to try to make what you're 10 seeing on the screen more what the artist originally 11 intended. So that's what these next two patents are going 12 to be about. 13 We'll start with the '168 patent. What we see 14 right here in the problem statement of the patent is we've 15 got figure 1 and we see these sort of -- the blob, if you 16 will, on the left. 17 But at the edge of that blob, you're hitting a 18 saturation point on your TV, right. So you might be able 19 to in the dark part of it, you might be able to see 20 distinctions of it, but when we get past the inner 21 triangle, we've now saturated the limit of this TV, so 22 you're not going to further see any more distinction in the 23 aspects that go beyond the inner triangle. 24 So what we're going to do, instead of just 25 clipping it, instead of saying okay, anything that's above

Page 174 1 100 I'm just going to set to 100 and hope the user never 2 realizes that you're not seeing what you're supposed to 3 see. 4 What we're going to do instead is we're going to 5 use some math, we're going to say let's take this whole 6 blob and let's adjust it down such that the most extreme 7 part of it is still within the capabilities of the TV so 8 that you, the viewer, will be able to see the gradations or 9 the differences in the blob that's there, even if your TV 10 is not able to show it in the most dynamic way that it was 11 originally meant to be. So that's sort of the problem that 12 we have here. 13 We don't want to clip the colors off. We want 14 to be able to show them to you as best as we possibly can. 15 So how are we going to do that. Well, we're 16 going to have in the bit stream, we're going to send along 17 with the underlying data some information to help us do 18 some math to be able to achieve that, either have it use 19 the best range your TV has or to make it more true to what 20 the artist wanted you to see in the first place. We're 21 going to encode a little bit of extra data and send it 22 along to help out on the end. 23 Here we're talking about on table 2A here a 24 whole bunch of different information that can be sent that 25 helps with that math.	Page 176 1 here that there's lexicography, there's not an argument 2 here that there's disclaimer or disavowal. They 3 acknowledge that plain and ordinary meaning should control. 4 But again it's just an attempt to substitute words for 5 reasons that we're not really sure of what's going on here. 6 So instead of saying that these second 7 parameters, the color transform parameters, represent at 8 least three successively applied color transforms, instead 9 of sticking with that language, they want to change it to 10 be that the transforms are "encoded descriptions." They 11 more or less want to go from these color transform 12 parameters represent something to they are encoded 13 descriptions. 14 We're adding the word "encoded" sort of from 15 whole cloth, and we're changing represent or representation 16 to describe or descriptions. Those are the two tweaks that 17 are being made to the verbiage of the claim. 18 But again, and you've seen this today, and I 19 don't need to read it to you again, but the Federal Circuit 20 has said when there's commonly used terms, we don't need to 21 just come up with alternative language, if the language 22 there already are terms that we know. 23 So if we look at the claim, again we're talking 24 about the bottom here, "wherein the color transform 25 parameters represent at least three successively applied
Page 175 1 Now, one of the things -- let me pause, I should 2 have said one other thing, which is without this 3 information being sent along, this is not something that 4 the TV can decode on its own. 5 So you heard today in the patents that we've 6 been talking about so far the decoder is going to try to do 7 the inverse of the quantization and there's a little bit of 8 interpolation and guessing going on, but you can do that 9 and you can be pretty faithful to it. 10 But what we're talking about here, it can't be 11 done without additional information. We can't just take 12 the bit stream as it is without additional information. 13 So what we're going to do is within the bit 14 stream, we're going to decode first parameters and second 15 parameters that are ultimately going to help us to have 16 these color transforms to be able to change the color so it 17 best is shown on your screen, even if it's a little bit 18 different than the color that would be otherwise found in 19 the bit stream. 20 And the dispute here is going to be about the 21 second parameters, the color transform parameters. 22 So there's a little bit of a trend here. What 23 has been attempted to again at least in the Complainant's 24 point of view is we're going to just substitute words for 25 the words that are in the claim. There's not an argument	Page 177 1 color transforms." That's what the applicant chose to 2 describe the claim as. 3 If they wanted to use the word "describe" as 4 opposed to "represent," you see that in the first stanza 5 there. So those words are used differently within this 6 very same claim. 7 What does that mean? Well, the dependent claims 8 provide different examples of what that means. Here if we 9 look in the middle, "wherein the color transform parameters 10 comprise coefficients for the three by three matrix." 11 In this embodiment, in this dependent claim, 12 those color transform parameters that represent at least 13 three successfully applied color transforms, they comprise 14 coefficients for the three by three matrix. That's one 15 example of what this could be. 16 So again, difference between represent and 17 describe. Well, those are both described in the 18 specification, both those terms are used as you go through 19 the specification to describe the invention. 20 But in the claim, they chose the word 21 "represent." I don't know why one would just swap for the 22 other word. 23 But with that said, Respondents in their brief 24 on page 21 have suggested, "the patentee used both words, 25 for both sets of parameters, to convey the same thing."

Page 178 1 That's Respondents' position. 2 So according to Respondents, in the intrinsic 3 record, both the words were used to describe the same 4 thing. Well, if that's the case, why are we changing the 5 word? Right? If they're exactly the same scope in the 6 intrinsic record, why are we changing from one word to 7 another? 8 I'm not asking that because I have the secret 9 answer. I don't. I don't know what the practical 10 distinction is alleged to be or what it might show up down 11 the road. 12 But even according to Respondents, there's no 13 meaningful difference between the denotation of those two 14 words in this context, so I don't know why we would just 15 swap out words. 16 Okay. And then I said the other thing was the 17 injection of the word "encoded." As you can see at the 18 bottom highlighting or at the term 7 at the top, the word 19 "encode" or "encoding" or anything like that is not found 20 in the claim language that we are construing. 21 It says "wherein the color transform parameters 22 represent at least three successively applied color 23 transforms." That's what it says. Now we're trying to 24 inject the word "encoded" into it. Again, there's no 25 lexicography to suggest doing that, there's no disclaimer	Page 180 1 lexicography. If you have any questions, I'm happy to 2 answer them, otherwise I'll sit down. 3 JUDGE BHATTACHARYYA: Not at this time. Thank 4 you. 5 MR. STEVENS: Thank you, your Honor. 6 MR. CHU: Good afternoon, your Honor. Kevin Chu 7 for Intervenor Dolby. It's nice to see you again. I'm 8 sorry, just give me one moment to get set up. My computer 9 just crashed so I'm trying to restart everything. 10 JUDGE BHATTACHARYYA: Okay. 11 MR. CHU: Permission to approach, your Honor? 12 JUDGE BHATTACHARYYA: Yes, go ahead. 13 MR. CHU: Thank you, your Honor. 14 Okay. So this slide deck covers two patents. 15 I'll start with the '168. So really with the '168 patent, 16 as you just heard, your Honor, there are really two 17 disputes. Just to quickly recap, set the stage for us, the 18 first dispute is what does it mean for the color transform 19 parameters to represent color transforms. 20 We saw a slide from Complainants just now that 21 said Respondents agree "represent" and "describe" mean the 22 same thing. If Complainants will agree to that 23 interpretation as well, that "represent" means "describe," 24 then that may solve this dispute. I don't think they have 25 agreed to that.
Page 179 1 where sometime in the file history somebody said it has to 2 be encoded. It just simply comes from whole cloth. 3 Now, the good news here -- the good news here is 4 that in claim 18 in the second stanza -- I'll just speak 5 louder and walk for a quick second because I don't have a 6 pointer, you can see that the color transform parameters 7 that we're injecting in this wherein clause refer back to 8 that second stanza. If we look already back at that second 9 stanza, we'll see that the first word is the verb "decode." 10 To the extent there's any requirement of encoding or 11 decoding, it's already right there. It already says that 12 the second stanza here is to decode color transform 13 parameters. 14 If we're just going to inject the word "encode" 15 it would read something like decode encoded color transform 16 parameters. There's no reason to do that. I'm not really 17 sure what the goal of Respondents are to have this word put 18 in twice. I have a suspicion, but I don't really know it. 19 But nonetheless, to the extent there's any 20 requirement of decoding, it's right there as the first word 21 of the second stanza and we don't need to add another word 22 to it to try to change the definition of what's already in 23 the claim. 24 Two things here, both of which are swapping in 25 new words for the language of the claim, no disclaimer, no	Page 181 1 I think in their brief, they say things like 2 "represent" means relates to or corresponds to, which those 3 terms in our view are very different than what "describe" 4 means. That's much broader and is not exactly clear when 5 something relates to something else. 6 So ultimately, the dispute on that term is -- 7 the first dispute I mean is whether the color transform 8 parameters must describe the color transform as in 9 providing what color transform operations to be used 10 actually are, versus if the color transform parameters only 11 need to relate to the color transforms, whatever that may 12 mean. 13 I'll get to an example shortly, your Honor, of 14 something that would arguably fall within Complainant's 15 broad construction but fall outside of our construction. 16 The second dispute is much simpler. Second 17 dispute is just do the color transform parameters need to 18 be encoded. 19 So starting with the first dispute, I'll just 20 very quickly, your Honor, lay some context. I think 21 Complainant's counsel did a good job laying the context for 22 this patent, so I'll go through this very quickly. 23 But here let's talk about what the patent 24 purported to solve, what was the problem. First, it's long 25 been known that video content can be color graded for a

Page 182 1 reference display, which is the display that's used for the 2 color grading process. And the way I think of this is a 3 creator of a video editing their own video on their own 4 display, which may be a very professional display with a 5 very high res, very high specs. 6 Now, the problem was that consumer rendering 7 devices, like people's TVs at home, there's a whole range 8 of specifications, and a lot of times, they're lower 9 quality, lower spec than what the artist of the video may 10 have used to create their video. 11 You can think of kind of like 4K TVs versus a 12 standard definition, different specs. 13 Here it's a similar concept, but we're dealing 14 with color spaces, color correction, which essentially is a 15 number of unique colors that the display can show. 16 Now, as the '168 patent itself explains, here at 17 column 1, lines 45 to 59, "rendering devices may not have 18 the capability to adapt to any color space nor have the 19 required knowledge to perform the optimal color 20 conversion." 21 And you can see later on in this same paragraph, 22 the patent describes that the correct color transform is 23 not deducible because color grading is a nondeterministic 24 artistic process. 25 The patent also notes that because of that	Page 184 1 Here is just one more example. The patent says 2 that the second parameters indicate information that 3 indicates -- I'm sorry, include information that indicates 4 the type of color transforms. So again, the point is that 5 the color transform parameters indicate the type of color 6 transform. That's the purpose of the color transform 7 parameters/second parameters. 8 Now, the reason the color transform parameters 9 matter is because, as the patent explains, the rendering 10 device, which is basically the person's TV at home, it 11 doesn't have the knowledge to know what color transforms to 12 perform. This is the issue the patent talked about. 13 So what the patent says is in the bit stream, 14 you should include information telling the end device what 15 color transforms to perform. That's the second parameters. 16 To put this all in plain English, at least how I 17 think about it, your Honor, is you can think of it as a 18 destination versus a route. So the first parameters are 19 the destination you're supposed to get to, and the second 20 parameters are the route that tell you how to get to that 21 destination from where you are today. 22 Here's an example of the color transform 23 parameters from the specification. You can see in the 24 table here on this slide, this is from the patent at column 25 5, lines 11 to 16, there's a parameter called
Page 183 1 issue, and this is at lines 1 to 6 of column 2, the patent 2 says "there is thus a need to encode a color transform." 3 It's talking about encoding a color transform. 4 So how did the patent purport to solve the 5 problem? The patent talks about encoding two sets of 6 parameters in the bit stream. You can see this on the 7 slide. This is column 3, lines 41 to 47, as well as 8 figure 3. 9 In figure 3 you see there is first parameters 10 and there's second parameters, both of which are encoded. 11 The first parameters -- as you can see in the excerpt of 12 the specification on the right, the first parameters 13 describe the characteristics of the color mapped output 14 signal, which in plain English means that it tells you the 15 characteristics of the target display and what the picture 16 should look like on that display. 17 These first parameters are the claimed target 18 parameters in the claim that we saw earlier, claim 18. 19 This figure also shows second parameters. The 20 second parameters, you can see here at lines 3, 41-47 of 21 the spec, it says the second parameters describe the color 22 transform that's encoded in the stream. 23 The second parameters are the claimed color 24 transform parameters that we saw in the claim earlier, 25 claim 18.	Page 185 1 colour_map_model_ID, and in this parameter, it will 2 identify the type of transform that's shown in this 3 table 1B. 4 Going through all this, your Honor, because I 5 want to show that the purpose of the patent aligns with the 6 construction that Respondents and Intervenor are proposing, 7 that the color transform parameters need to describe or 8 identify what the color transforms are and how to perform 9 them, not just generally relate to color transforms in 10 general. 11 We can also see that the specification 12 consistently uses the terms "representative" and "describe" 13 interchangeably. There's some examples on this slide, 14 column 2, lines 14 to 22, column 3, lines 41 to 47, column 15 5, lines 61 to 67. I believe we identified additional 16 examples as well in our briefing. 17 Just to be clear, your Honor, it's not our 18 position that the term "represent" by itself is somehow 19 insufficient or that we're claiming lexicography or 20 disclaimer. We're not. 21 The problem here is Complainants appear to be 22 interpreting the term differently than what we believe the 23 term "represent" means. That's why we're trying to get 24 clarity with your Honor right now. 25 Just in case there's any doubt about what

Page 186 1 "represent" means, we have cited various cases, including 2 from the Federal Circuit, you can see on the slide here, 3 this is Tehrani versus Hamilton Medical, Inc. These cases 4 all say that the word "represent" cannot be interpreted so 5 broadly as to include any relation, which is how 6 Complainants appear to be interpreting the term 7 "represent." Any relation. 8 This case law, we'll have a couple more slides 9 on the case law, it's in our brief, so for the sake of 10 time, I'll move past it. 11 So what do Complainants argue? They argue that 12 Respondents offer no support or examples of what arbitrary 13 parameters they contend Complainants are attempting to read 14 into this term. So they argue that, because of that, our 15 construction must somehow be wrong. 16 First, I'm not sure I understand that argument 17 or why Respondents would be wrong, simply because we 18 haven't provided examples. 19 But second, putting that aside, let's talk about 20 a specific example, just to make this concrete. And to do 21 that, we can look at the patent itself, your Honor. So in 22 the patent, remember we talked about the first and second 23 parameters, the first parameters are the target parameters, 24 the second parameters are the color transform parameters. 25 Under Complainant's construction, arguably,	Page 188 1 different than the second parameters, which are the color 2 transform parameters. 3 The first parameters, for example, let's say it 4 talks about something called rec 2020, this is a color 5 space. It says on the end display, the first parameter 6 says the end display should have rec 2020. Theoretically, 7 Complainants could make an argument that that relates to 8 the color transform because it talks about how what the end 9 picture should look like. 10 Now, we wouldn't agree, your Honor, that that 11 represents the color transform, but I'm just pointing out 12 an example of where they might go and why we're asking for 13 clarity right now to prevent these kind of later disputes 14 down the line. 15 And again, just want to reiterate this, column 16 3, lines 41 to 47, here says in describing figure 3, "in 17 step 102, color parameters that describe the color 18 transform are encoded in the stream." So parameters that 19 describe the color transform, not just relate to it in some 20 possible way. 21 I'll turn to the second dispute, your Honor, 22 which I think is a lot simpler, whether the color transform 23 parameters must have been encoded. 24 We talked about this briefly earlier, but the 25 premise of the patent is that the color transform must be
Page 187 1 target parameters could be color transform parameters, 2 because they could argue that the target parameters relate 3 to the color transform. 4 Here on this slide, we put an excerpt from 5 column 5, lines 55 to 61. There it lists various example 6 first parameters or the target parameters. Some of these 7 parameters, such as colour_map_vdeo_format or 8 colour_map_primaries, they arguably relate to color 9 transforms, even though they don't describe the color 10 transform, but they arguably relate to it. 11 JUDGE BHATTACHARYYA: How do they arguably 12 relate to it? 13 MR. CHU: They arguably relate to it -- 14 actually, maybe this figure will describe that even better. 15 So this is figure 3, your Honor. We looked at 16 this figure earlier. Slide 19. In figure 3, you can see 17 it says "color transform," it has an arrow that points to 18 "encode first parameters," and it has an arrow then that 19 points to "encode second parameters." 20 So arguably, someone could look at this figure 21 and say well, any first parameters must relate to the color 22 transform because look at the figure itself. It has "color 23 transform" and it points to "first parameters." And that's 24 the issue we have, your Honor. Because in our view, first 25 parameters, which are the target parameters, those are very	Page 189 1 encoded in the bit stream. And looking at the claim 2 itself, this is claim 18, the plain language of the claim 3 in our view, your Honor, shows that the color transform 4 parameters must be encoded. 5 So first, I've highlighted two things on this 6 slide, this is claim 18. First, the claim says "decode 7 color transform parameters." Well, if the color transform 8 parameters are not encoded, then what are you decoding? 9 We're giving meaning to the claim by specifying that the 10 color transform parameters must have been encoded first 11 before being decoded. 12 Similarly, a few lines down, the claim also says 13 "decoded color transform parameters." It wouldn't make 14 sense for the claim to require decoded color transform 15 parameters if they were not first encoded. 16 Now, the concern here, your Honor, and why we're 17 even raising this, is we don't want to be in a situation 18 where Complainants later take the position that something 19 can be decoded even if it was never encoded in the first 20 place. 21 JUDGE BHATTACHARYYA: Okay. 22 MR. CHU: For example -- I'm sorry, were you 23 about to -- 24 JUDGE BHATTACHARYYA: Well, just maybe it 25 relates to what you were saying.

Page 190 1 But when we talk about decoded color transform 2 parameters, then at that point, the color transform 3 parameters are not encoded; right? 4 MR. CHU: That's right. 5 JUDGE BHATTACHARYYA: So you're saying at one 6 point they were encoded? 7 MR. CHU: Exactly. We're certainly not saying, 8 your Honor, these are encoded even after they're decoded, 9 just to be clear. 10 JUDGE BHATTACHARYYA: Okay. All right. Thank 11 you. And I interrupted you so please go ahead. 12 MR. CHU: No, no, that was a good question, 13 thank you. 14 I just wanted to give an example of our concern. 15 So theoretically -- and I don't know that Complainants will 16 argue this, but they haven't agreed to our construction so 17 we don't know. But if you run a decoding algorithm on data 18 that's never been encoded and unless the algorithm does 19 nothing because there's nothing to decode, theoretically 20 they could argue that well, that is now decoded data 21 because you ran the algorithm on it even though it was 22 never encoded. We don't want to run into that potential 23 situation. 24 Another example is if Complainants later argue 25 in this investigation that decoding simply means something	Page 192 1 that they have taken that position yet. 2 JUDGE BHATTACHARYYA: What's the difference? 3 They have said that in the brief, right, so what -- 4 MR. CHU: Your Honor, if this is taken to be 5 binding on their position, we will happily accept it. 6 JUDGE BHATTACHARYYA: Okay. 7 MR. CHU: But we have a dispute, we don't quite 8 know why. From our perspective, it's an odd situation, and 9 we are looking for that confirmation. 10 JUDGE BHATTACHARYYA: Okay. Understood. 11 MR. CHU: I'll end it there, your Honor. Can I 12 take any questions? 13 JUDGE BHATTACHARYYA: No other questions at this 14 time. Thank you. 15 MR. CHU: Thank you. 16 MR. STEVENS: May I make rebuttal comments 17 before we move on to the next patent? 18 JUDGE BHATTACHARYYA: Yes. 19 MR. STEVENS: Thank you, your Honor. 20 So this might fall under the camp of maybe some 21 more meeting and conferring would have done the parties a 22 little bit of good. I'm pleased to report that through the 23 meet-and-confer process, they had originally disputed that 24 successively required back to back, and now they have 25 agreed that it doesn't, that it doesn't have to be back to
Page 191 1 like translating or interpreting data and then nothing 2 needs to have been encoded in the first place, that would 3 be an issue as well. 4 Obviously, we, Respondents and Intervenor, do 5 not consider any of that to be decoding. But we don't know 6 what Complainants will end up arguing. And the point of us 7 raising this dispute before you now, your Honor, is to 8 avoid these type of later disputes. 9 I heard Complainant's counsel -- for a different 10 term, but Complainant's counsel said that the purpose of 11 claim construction is to bring clarity to the claims so we 12 understand what the claims mean and the parties are on the 13 same page. 14 That's what we're trying to do here, your Honor, 15 bring clarity to the claim so there's no potential for 16 mischief down the line. 17 Interestingly, and this is Complainant's 18 rebuttal brief at page 20, Complainants say that they do 19 not dispute that the parameters are encoded upstream. They 20 say that the decoding step already establishes that. 21 So if that's the case, your Honor, then if 22 Complainants will agree on the record today that the color 23 transform parameters must have been encoded first in order 24 to be decoded, then perhaps we don't have a dispute. I'll 25 let them answer that question, your Honor. I don't know	Page 193 1 back, so we narrowed that dispute through the claim 2 construction process. 3 But now I'm hearing some things a little bit 4 differently. 5 What we said in our brief we stand by on the 6 encoding part. Not going to run away from that. My 7 suspicion, and again I don't know what -- he doesn't know 8 what I'm thinking, I don't know what he's thinking. My 9 suspicion is down the road you're going to hear that 10 something is not encoded unless it's variable encoding, 11 that encoding somehow requires variable encoding, and that 12 decoding and parsing are two completely different things, 13 despite the fact that all the evidence will show that 14 they're one and the same. 15 That's where I think this is going. Could be 16 wrong. But there's no reason to add the word "encoding." 17 The claim requires it to be decoded, because these are 18 decoding claims, not encoding claims. And so to the extent 19 that whatever decoding is required, we find that already in 20 the claim, it already says that. 21 Then on the other part, again, I didn't actually 22 hear a practical distinction between "represent" and 23 "describe." I still haven't heard it. And so to me, this 24 is just still switching one word for another, despite the 25 fact that they are both used in the intrinsic record and

Page 194 1 the claim picked one versus the other. 2 No party is coming before your Honor to say that 3 there's a meaningful difference between those two words, 4 and so I don't know why we just exchange one out for 5 another. 6 But with that, I'm happy to answer any questions 7 that you may have. 8 JUDGE BHATTACHARYYA: Okay. I think Mr. Chu was 9 concerned that Complainants' view of "represent" translates 10 into any relation with at all. 11 MR. STEVENS: No, it doesn't. I mean, I heard 12 that concern too, and I'm happy to put cold water on that. 13 No, we're not going to say that just any old -- 14 anything about it that could possibly be put together is 15 enough to meet the claims, no. The claims -- the 16 specification gives us specific, concrete ways. Like I 17 showed you in that dependent claim, where it actually has 18 the coefficients for a three-by-three matrix. 19 Yeah, that's describing it right there. We're 20 not trying to enlarge this to say some tangential relation. 21 You're not going to see that down the road. 22 But nonetheless, I don't think that that 23 requires us to change one word to another word. And hold 24 me to that. If we come to the hearing and we're trying to 25 say there's just some random tangential relationship, I'm	Page 196 1 their construction, so we thought that ship had passed us. 2 Now we're going to bring up new claim construction issues 3 that were brought up and then dropped? I don't know how we 4 proceed forward if we're going to continue to hear sort of 5 disputes that were in front of us a month ago that got 6 dropped. I think this is past tense here. 7 JUDGE BHATTACHARYYA: I don't want to address 8 that now, but if something needs to be done, then please 9 file a motion. 10 MR. CHU: Will do, your Honor. Thank you. 11 So I want to briefly address "represent." We 12 just heard counsel discuss well, if there's no difference, 13 then why are we arguing about this term? Why are we trying 14 to use a different word? 15 Again, our concern is we don't know how they are 16 interpreting the word "represent." They seemingly won't 17 agree that "represent" means describe, so then how are they 18 interpreting the term? 19 I heard counsel say they don't mean to say that 20 "represent" can be something that bears any relation to 21 something else. That's a little bit contrary to their 22 brief. In their brief, and I can pull it up if you would 23 like, your Honor, they say "represent" means relate to. 24 So this is all part of our concern, and that's 25 why we're looking for clarity on what represent means.
Page 195 1 assuming you're going to disagree with me, and that's fine 2 because that wouldn't be enough. But the specification 3 gives us a lot of examples. The dependent claims provide 4 specificity with what representation there must be. And we 5 will meet all those elements. 6 JUDGE BHATTACHARYYA: Okay. Thank you. 7 MR. STEVENS: Thank you, your Honor. 8 MR. CHU: So very briefly, your Honor. First, 9 counsel mentioned something about how Respondents drop a 10 dispute about "successive" and Respondents agree it doesn't 11 mean one after another. That's not correct. 12 We do believe "successive" means it has to be 13 one after another. I think that's what the word 14 "successive" means. So I'm not sure -- 15 JUDGE BHATTACHARYYA: That's not something we've 16 discussed today; right? 17 MR. CHU: It's not. And we can talk with the 18 other side in a meet-and-confer offline. Might have been 19 ships passing in the night. I'm not sure. I want to make 20 clear for the record we don't agree with that 21 characterization. 22 MR. STEVENS: Before we go any further, your 23 Honor, that's why we have this process. They told us that 24 they believe that word to be restricted to be back to back 25 successfully and then they dropped that altogether from	Page 197 1 JUDGE BHATTACHARYYA: All right. Thank you. 2 MR. CHU: Thank you. Your Honor, the next term 3 is the '751 patent. I think it's about 3:31, which I 4 believe is your normal break time. Would you like to take 5 a break before we proceed? 6 JUDGE BHATTACHARYYA: Why don't we take a break. 7 15 minutes. Thank you. 8 (Recess.) 9 MR. CHU: Permission to proceed, your Honor? 10 JUDGE BHATTACHARYYA: Yes, please go ahead. 11 MR. CHU: Kevin Chu from Quinn Emanuel for 12 Intervenor Dolby. Your Honor, good news, we're on our last 13 patent, last term of the day. '751 patent, only one term 14 in dispute for this patent. 15 To help give hopefully some helpful context to 16 the dispute, I'm going to start with a brief overview of 17 the patent. 18 So I'm on slide 26. The '751 patent claims, you 19 can see here, priority to a PCT filed in December 2006. So 20 that's the relevant time frame for determining what a 21 person of skill would have known. And sorry, I don't know 22 what's going on with the flickering. 23 JUDGE BHATTACHARYYA: Okay. 24 MR. CHU: I'll try to fix that. 25 Now, at a high level, your Honor, as the '751

Page 198 1 patent itself states, it's about "providing color grading 2 or color correction for a multiplicity of displays." This 3 is from the patent at column 3, lines 10 to 14. 4 Now, to be clear, the patent is not about just 5 color grading or color correction in general. Those were 6 long known concepts. It's about a specific way to do it 7 for a multiplicity of displays. 8 What is color grading or color correction? The 9 patent explains that, and this is at column 2, lines 57 to 10 64, the patent explains that "the purpose of color 11 correction is to predict what the consumers are going to 12 see and to change the colors in a way to achieve the 13 original artistic intent on the output medium." 14 Put in plain English, your Honor, when someone 15 makes content like a video, I discussed this briefly 16 earlier, when someone makes content like a video, how it 17 looks on their screen when they make it in their 18 professional studio, very high-end display, it can look 19 very different than how it ends up looking on someone 20 else's screen, like someone's TV at home, someone's monitor 21 at home, that may not have the same specification, the 22 technical specs, capabilities of the creator's display. 23 And I see it keeps flickering, let me just 24 unplug and plug it back in. 25 JUDGE BHATTACHARYYA: Okay.	Page 200 1 For example, when they're creating the video, 2 they can make multiple versions, they can make one version 3 that's maybe a little bit dimmer because some of the 4 displays that might play the video may not be able to get 5 as bright because they're a little bit lower quality 6 display. 7 The patent talks about this wide variability 8 among different displays that I've just mentioned. It 9 says, and this is at column 1, lines 17 to 29, "current 10 products have a wide range of features that can vary from, 11 for example, very bright displays with dim surround, to 12 front projection displays with dark surround." 13 So what was the problem that the patent is 14 trying to solve. As the patent explains, this is from 15 column 6, lines 8 to 12, the problem was that "due to the 16 variety of displays on the market and being used by 17 consumers, it is a near impossible task to produce one 18 version of each feature for each existing individual 19 display." 20 Just for context here, your Honor, the word 21 "feature" here when it says "each feature," that refers to 22 content such as a movie. You can see that, for example, in 23 the slide, column 14, lines 52 to 55, it says "content 24 (e.g. movie or feature)." 25 So put in plain English, as I just discussed,
Page 199 1 MR. CHU: While it's loading, your Honor, 2 speaking of artistic intent, just to give a concrete 3 example of what this really meant. This year a big 4 blockbuster came out, The Odyssey, I don't know if you've 5 seen it your Honor, but one of the big things mentioned in 6 the media, the producers, the director, they want everyone 7 to go watch it in true IMAX. 8 Why? Because watching in true IMAX is how they 9 filmed it so they want you to see it exactly as they 10 produced it, as they saw it, so you see it the same way 11 they see it, the same colors, same vivid colors, same 12 contrast, everything, same aspect ratio. That's how they 13 want you to see it. 14 Not everyone can go into a full IMAX theater, in 15 D.C. I'm not even sure if there's a true IMAX around here, 16 closest might be Philly, so we have to go to a regular 17 theater where we don't have true IMAX technology. So 18 ultimately what we see may be a little bit different than 19 what the producers, director of The Odyssey, what their 20 artistic intent fully was. 21 Color correction helps with that, to try to make 22 the video look consistent across various displays with 23 various different specs and capabilities, you can tweak the 24 video, the creator can tweak the video, to best fit the 25 specs and capabilities of each individual display.	Page 201 1 what the creators want is their video to look the same, 2 generally the same, and as they intended across many 3 different TVs, many different displays. But the problem 4 was they couldn't hand craft literally a unique version of 5 the video for every single possible display out there, 6 because there is thousands, maybe tens of thousands of 7 possible displays out there. Maybe more. 8 Again, as the patent puts it, it was a near 9 impossible task to be able to do that. 10 So how did the '751 patent try to solve this 11 problem? It took a middle ground approach. So instead of 12 making a separate version of the movie for every possible 13 display, it used what it calls virtual device models to 14 emulate different display models. 15 For example, you can see here on this slide, 16 slide 31, this is column 3, lines 15 to 25, the patent says 17 "embodiments of the present invention include emulating one 18 or more device models on several professional displays for 19 proof viewing," proof viewing, "with the possibility of 20 alerting a colorist," the person making the content, "alert 21 a colorist of a problem in need of correction in one or 22 several models. The color correcting process can be 23 performed to provide a variety of virtual display models." 24 The patent goes on to explain that each of these 25 virtual display models can represent a group or class of

Page 202 1 displays. This is from the patent column 7 lines 61 to 67. 2 So instead of making an individual, unique 3 version of the movie for every possible display, they 4 grouped it, they said maybe these 1000 displays, they all 5 have similar specs, let's create that and make that one 6 virtual device model. And same thing for the other 7 potential displays on the market. This is the middle 8 ground approach that the patent took. 9 Okay. And then the patent says "having created 10 the virtual device models, subsequently on the display 11 side," this is the side where the consumer, consumer's TV, 12 "respective virtual device models can be selected for 13 display of a picture on a display having similar display 14 attributes to those depicted by the created virtual device 15 models." This is from the patent at column 9, lines 17 to 16 21. This is what I just discussed about end user will have 17 their own TV or monitor, display. On the display side, it 18 will figure out which virtual display model that the 19 creator made is most similar to its own specs. 20 Put differently, once a video creator has all of 21 the virtual display models set up that they want to make, 22 then when the video is going to be played back on a 23 consumer's TV, as I just mentioned, the TV can choose the 24 virtual display model that best matches its own specs. 25 What the patent says here, column 10, lines 35	Page 204 1 content creation side. These virtual device models and 2 videos are then delivered to what the patent calls the 3 content display side. 4 We can see these different sides in figure 3, 5 shown on slide 37 here. In figure 3 on the left, that's 6 the content creation side. And as the patent explains, 7 this is column 9, lines 37 to 50. "On the content creation 8 side 302, a plurality of versions and conditions are 9 created as virtual device models 310-318." 10 Moving to the content display side, you can see 11 that on the right side of figure 3, on the bottom right, 12 "content display 304," as the patent explains still at 13 column 9, lines 37 to 50, "on a consumer display side 304, 14 there are a plurality of available picture versions." 15 And the patent explains how the content is 16 delivered from the content creation side to the content 17 display side. That's through content delivery 306. You 18 can see that in the middle of figure 3. 19 The patent explains, this is at the same column 20 9 as I mentioned, patent explains that "content delivery 21 306 can occur by any known method," it gives several 22 examples, "broadcast by satellite, cable, antenna, stored 23 on media, et cetera." 24 So what this makes clear, your Honor, is the 25 content creation side, content display, these are different
Page 203 1 to 37, this is slide 33, the patent says, "while each 2 display may not have an exact match with a virtual model, 3 each display can select a best match" for the model. 4 Going back now to the process of creating the 5 virtual display models, the patent explains at column 8, 6 lines 3 to 13, that "during post-production, color 7 correction is performed for one, two, or several of these 8 virtual device models." 9 The patent goes on to explain at column 9, lines 10 33 to 36 that "at the end of the method of color correction 11 of figure 2, there will be N video masters for N display 12 groups, represented by respective virtual device models 13 determined in step 208." 14 So what this is saying, your Honor, is for each 15 virtual device model, there is a separate, unique video 16 tailored to the specs of that virtual device model. 17 Here, your Honor, is another example of the 18 patent explaining this process of creating a separate video 19 for each virtual device model. This is slide 36, and here 20 we have column 15, lines 46 to 52, the patent says, "at 21 step 910, several versions of a movie or other content can 22 be made, and each version can be color corrected in 23 accordance with individual virtual device models." 24 Now, all of this virtual device model and video 25 creation, this all happens on what the patent calls the	Page 205 1 processes, and these can also take place at very different 2 locations. The delivery can be through satellite, cable, 3 antenna, et cetera. 4 And I guess just to bring this back to what I 5 discussed earlier, regarding the artist or colorist, they 6 can create the content, content creation side, in their own 7 office at their own home using their own professional 8 display or whatever display they're using to create their 9 video and impose their artistic intent. 10 The content delivery side -- I'm sorry, content 11 display side, this happens elsewhere, this is on the end 12 device. For example, if I'm watching TV at home, my TV is 13 the content display side. 14 Now, the asserted claims here are directed to 15 the content display side, so let me focus in on that. 16 Figure 7 I think does a good job of illustrating 17 the content display side, so I'm going to use that figure 18 to walk us through how it works. 19 We talked earlier about how the content creation 20 side creates separate versions of the source video for each 21 virtual device model. Figure 7 shows how the display 22 decides which version of the video to play. 23 Looking at slide 38, the patent at column 12, 24 lines 12 through 17, the patent explains that "the virtual 25 device model selection process makes the decision about

Page 206 1 which version of the picture data is chosen, and is to be 2 made on the basis of a comparison of the actual display 3 specification parameters," this is of the end device, "with 4 the virtual device model (VM) parameters." 5 Now let's briefly walk through some of the 6 components, elements shown in figure 7. First, there is a 7 picture selector 701. You can see 701 at the top of figure 8 7. 9 As the patent explains, this is column 12, lines 10 18 through 28. "The picture selector 701 of figure 1 can 11 be a standalone device or can be integrated into a display 12 unit 717." 13 As we'll see later, the asserted claim here, the 14 display does integrate the picture selector. The picture 15 selector is one of the limitations to the display preamble 16 comprising claim. 17 Next we have picture source 703. In the same 18 specification cite I just read from, it says, "a picture 19 source device 703 provides picture data 711 for all virtual 20 device models. This means that if a number, n, of VMs," 21 that's virtual device models, "are to be supported, then n 22 sets of picture data are to be provided." 23 So that's a one-to-one link, your Honor. For 24 example, this says eight sets of picture data. 25 Next we have a picture switch 704. This is	Page 208 1 what the picture calibration is. It says, "this picture 2 calibration block 706 can include software or circuitry 3 that adapts the picture data 714 to represent the virtual 4 device model (VM)." 5 What this is, your Honor, is this is the final 6 calibration step to fine-tune the picture data for the 7 specific display. 8 I'll get into some examples of what that could 9 mean in reality as well. 10 First let's move on to the asserted claim, claim 11 14. Claim 14 recites that "the picture selector is further 12 configured to select one of the plurality of the picture 13 data." Disputed issue here is what does a plurality of 14 picture data mean. 15 Complainants propose plain and ordinary meaning, 16 as you can see, your Honor, without describing what that 17 plain meaning is. Respondents and Intervenor, to avoid 18 ambiguity and issues of shifting sands later on in the 19 investigation, kind of like what I discussed with the last 20 patent, we did provide what we believe the plain meaning 21 is. I'll get into why our meaning is the correct meaning. 22 So here's what the dispute is with respect to 23 this term. And let me start by saying that I understand 24 from counsel during the break that they no longer dispute 25 that plurality means two or more, so I'm going to move past
Page 207 1 towards the middle of figure 7. Going back to the patent 2 specification, column 12, lines 18 to 28, it explains that 3 "a picture switch 704 then selects one picture data set 714 4 out of the set of n picture data sets for display or 5 further processing." 6 We'll get into shortly what that further 7 processing means. 8 Your Honor, picture switch 704, the patent 9 further elaborates at column 12, lines 43 to 54 that "the 10 picture switch 704 selects the picture data 714 from the 11 set of picture data 711 based on a decision which is 12 signaled by signal 713." 13 And you can see, your Honor, in figure 7 that 14 the signal 713 comes from what's labeled decision matrix 15 702, which the patent says at column 12, lines 52 to 54, 16 "the decision matrix 702 can include a look-up table, state 17 machine, or other device or memory." 18 What the decision matrix does, your Honor, is it 19 decides which of the multiple picture that I have, 20 essentially the multiple versions of the movie, do I want 21 to play based on the specs of this TV. 22 So earlier, I mentioned the picture calibration 23 or I mentioned further processing, this relates to the 24 picture calibration. This is component 706 of figure 7. 25 The patent at column 12, lines 33 to 37 explains	Page 209 1 that. They can confirm when they come up here. 2 Based on Complainants' briefing, they appear to 3 contend that picture data can include metadata as opposed 4 to what we've been referring to as metadata, as opposed to 5 actual image data, data that can be rendered into an actual 6 image on the screen. 7 For example, Complainants say in their initial 8 brief that picture data can "include data to inform changes 9 to the pixel information." This is from Complainants' 10 initial brief at page 43. 11 They give an example, they say picture data can 12 be a brightness adjustment parameter. That's what we're 13 referring to as metadata, your Honor, data that helps alter 14 the image data into how you want to calibrate it, tweak it, 15 correct it, et cetera. 16 So in other words, as we understand it, 17 Complainant's view is that a single movie can constitute a 18 plurality of picture data as long as there are multiple 19 sets of metadata describing how to adjust the movie, for 20 example make it brighter, make it dimmer, change the 21 colors, et cetera. 22 Our view, Respondents and Intervenor's view, is 23 that the claim requires multiple actual, renderable 24 versions of the movie. As we saw when I was going through 25 figure 7. So as we understand it, your Honor, that is the

Page 210 1 dispute now, just really this one issue for this term. 2 I mentioned there was a dispute about plurality. 3 I think we can move past that. I believe that's been 4 resolved. 5 So staying with the key dispute, can picture 6 data be metadata, let's start with the claim language to 7 see what picture data means in the context of the claim. 8 In our view, your Honor, the plain meaning, the plain 9 language of the claim itself, claim 14, supports our 10 construction and makes clear that metadata cannot be 11 picture data. 12 Claim 14 recites "one of the plurality of 13 picture data selected by the picture selector to be 14 displayed." What does this tell us? 15 It tells us that whatever the picture data is, 16 it has to be something that can be displayed. That's what 17 our construction, Respondents' and Intervenor's 18 construction, requires data that can be rendered into an 19 image on a display. That's what we mean by those words. 20 Metadata, on the other hand, like the brightness 21 adjustment parameter that Complainants mentioned could be 22 picture data in their initial brief, that kind of stuff 23 metadata cannot be displayed. So it can't be the claimed 24 picture data. We know that from the plain language of the 25 claim of itself. This language rejects Complainants'	Page 212 1 picture data. We've highlighted that in green. 2 The picture data is what gets selected as an 3 output after you compare the display requirement to the 4 virtual device model parameter. That's what the claim is 5 talking about. So these are separate claim elements and 6 distinct things, your Honor. 7 If Complainants were correct that picture data 8 includes metadata -- and let me use their words from their 9 brief, they say picture data is data to inform changes to 10 the pixel information, what we call metadata. 11 If they are correct about that, then the virtual 12 device model parameter, which is metadata, will qualify as 13 picture data. But it's already a separate claim element, 14 as we see in claim 14, so we know that can't be the case. 15 Complainants' construction essentially would 16 collapse the virtual device model parameter and the picture 17 data limitation, these two limitations, into one and the 18 same. 19 Moving to the specification, the specification 20 also tracks this same separation of picture data from 21 metadata. An example excerpt here, this is slide 55, 22 column 3, lines 42 to 47. 23 As shown in this excerpt from the specification, 24 it says the selection process matches the virtual device 25 model specifications, that's in blue, against the device
Page 211 1 construction. 2 Going back to Complainants' opening brief at 3 page 43, the page we just looked at, their own brief proves 4 the point that metadata isn't something that's displayed. 5 For example, here they say the picture data 6 could be a brightness adjustment parameter, which when 7 selected would be applied to the picture to adjust the 8 brightness accordingly. 9 So they concede that the brightness adjustment 10 parameter is something that's applied to the picture. The 11 brightness adjustment parameter is not something that 12 itself is displayed. 13 The picture is what's displayed after the 14 brightness adjustment parameter value has been applied to 15 it. 16 In our view, your Honor, there's additional 17 language in the claim that further confirms picture data is 18 not metadata. The claim lists the display requirement. 19 We've highlighted that in yellow. It says "a display 20 specification including at least one display requirement." 21 And then it separately lists the virtual device model 22 parameter, that's in blue. The claim says "virtual device 23 models including at least one parameter for specifying at 24 least one display feature." 25 And then it separately lists the plurality of	Page 213 1 specification, we've highlighted that in yellow. 2 It says "so that the best picture data is 3 selected." That's in green. 4 So here the specifications, including the 5 virtual device model specification, it's not the picture 6 data. These are separate things. The specification, that 7 metadata is what's used to select the picture data. 8 Some lines down in this same excerpt, it says 9 "the picture selector compares the display feature of at 10 least one VMS," we highlighted that in blue, and VMS stands 11 for virtual model specification, "compares the display 12 feature of at least one VMS against the display requirement 13 of the display specification," again highlighted in yellow. 14 And to do what? "To control a display picture," 15 that's highlighted in green. 16 So again here we see the virtual device model 17 specification on one side of this comparison, comparing 18 that specification to the display feature. And what the 19 display picture is, it's the result of that comparison. 20 The VM spec itself, VM specification is not the display 21 picture. 22 Moving to the prosecution history, this 23 similarly supports our view that metadata and picture data 24 are different things, and that multiple videos are 25 delivered in the '751 patent claim.

Page 214 1 During prosecution, you can see, your Honor, 2 this highlighting is actually from Complainants' CMX-11 3 exhibit. This is their highlighting, not ours, but we 4 think this highlighting actually proves our point, that 5 during prosecution, you can see on here slide 56, the 6 applicants distinguish their invention, the '751 applicants 7 distinguished their invention from a reference called 8 Itakura. And they said Itakura display terminal is "only 9 able to receive and process one and only one display 10 picture and has one and only one set of display 11 specification." 12 Later on, and this is from their office -- this 13 is from their response to an office action, applicant's 14 response, later on the applicant says, "Therefore, each of 15 the user display terminals of Itakura clearly does not 16 receive or process multiple picture data." Why? Because 17 as they said before, Itakura processes one and only one 18 display picture. 19 They also say Itakura clearly does not have a 20 plurality of virtual device models. Why is that? That's 21 because, as we see in the first excerpt, applicants say 22 Itakura has one and only one set of display specifications. 23 What this shows here, your Honor, is it was 24 applicant's own understanding when they applied for this 25 patent that the patent allows for only -- it does not allow	Page 216 1 conversion. It is not itself the color information being 2 converted. Color information being the information, the 3 image information that's ultimately rendered into an image. 4 This is from the Doser publication. The 5 publication relates to the -- the Doser application we just 6 saw, the Doser application, that is the provision also for 7 this same publication. 8 So here in paragraph 0025 of the Doser 9 publication, I'm on slide 58, Doser says, "the metadata 10 approach enables the display device" to convert the source 11 color space. So again, the metadata is helping with the 12 conversion. It's not what's ultimately converted or being 13 displayed. 14 This is slide 59, claim 4 from the Doser 15 publication. Again, Doser, this is the same inventor, the 16 same as the first named inventor on the '751 patent, so it 17 shows how he understands the term "metadata" at the time. 18 His own claim 4 recites "generating metadata 19 necessary for the color information from the source color 20 space to color information for the different color space." 21 This is another example of how Doser treats metadata. In 22 every instance we've seen, your Honor, Doser treats 23 metadata and color information as two separate things. 24 Color information being the information that will be 25 rendered -- can be rendered into the image.
Page 215 1 for one and only one display picture. That's how they 2 distinguished Itakura. 3 Next we have the Doser prior art. Just to clear 4 something up here, your Honor, I saw in Complainants' 5 rebuttal brief they said something along the lines of the 6 Respondents/Intervenor mischaracterized Doser or 7 mischaracterized applicant's statements about Doser. I 8 want to clear that up. 9 We're not alleging that Doser shows some kind of 10 lexicography or disclaimer. That's not what we're saying. 11 We're saying if you look at Doser, the prior art itself, 12 that shows how people of skill in the art at the time of 13 the invention understood terms like metadata, understood 14 the difference between image data that can be rendered 15 versus metadata. 16 And Doser is particularly important or we think 17 applicable here because Doser, that's the same inventor as 18 the first named inventor on the '751 patent. 19 Here you can see on the slide, this is from the 20 Doser provisional application, slide 57. Doser describes 21 "information that is preserved by means of metadata all the 22 way down to the sink which comprises the display device." 23 So that the display can convert the color space used to 24 another color space. 25 Here the metadata is described as enabling a	Page 217 1 Another prior art reference considered during 2 prosecution, this is Bogdanowicz, might be saying that 3 wrong. Bogdanowicz. Taking a look at figure 2 of 4 Bogdanowicz, you can see boxes labeled "input metadata" and 5 "image pixels." And these are -- you can see in the figure 6 2, this is on slide 60, these are separate data paths going 7 to different components in figure 2. The metadata, you can 8 see, flows to something called script generator 235. 9 And then what Bogdanowicz says in his paragraph 10 0031 is the script generator and script are used to process 11 the image, that's going to be the image pixels we see in 12 figure 2 separate from the metadata. So just another 13 example of folks in the art of ordinary skill at the time 14 of the invention understanding metadata and data like image 15 data that can be rendered into an actual image to be very 16 different things. 17 One more example from Doser -- I'm sorry, 18 Bogdanowicz, your Honor, this is slide 61. Same concept, 19 figure 3 here shows you have these separate metadata boxes, 20 and they all feed into what's called a 3-D LUT, a lookup 21 table, that processes each source's color data. 22 You can see that in paragraph this is 0035 of 23 Bogdanowicz, it explains that process. Using the metadata 24 to process the image. 25 Now, I want to address some of the arguments

Page 218 1 Complainants made in their rebuttal brief, in addition to 2 what I've already mentioned. First, Complainants -- this 3 is the specification, not the claim, but the specification 4 says that picture data can be selected for further 5 processing, for display or for further processing. 6 And see that on the slide, this is slide 62. 7 This is from Complainants' rebuttal brief pages 20 to 21. 8 And then they argue that "data selected for further 9 processing is, by necessity, data that is not yet in a form 10 ready to be rendered into an image on a display." That's 11 their argument, your Honor. 12 That argument is incorrect. You can certainly 13 take a finished, renderable picture and still calibrate it 14 further. There's no reason why you can't do that. In 15 fact, the patent discusses doing exactly that. That's the 16 color correction process that we went over earlier. That's 17 from the content creation side. So that argument, your 18 Honor, is not correct. 19 Needing more work done to a picture doesn't mean 20 the picture wasn't already a picture to begin with. 21 I'll just put that a little differently because 22 this is an important point so I really want to nail this 23 in. Just because picture data can be further processed 24 doesn't mean that data itself was not already independently 25 renderable on a display.	Page 220 1 same view of what the withdrawn claims were. The examiner 2 understood that the withdrawn claims were about how to 3 create content, wasn't talking about how to display 4 content. 5 So again, these withdrawn claims have no bearing 6 on the claim we're talking about here. 7 You can see on slide 64 that we have the 8 examiner's office action, Exhibit 31 at page 3, examiner 9 says group 1 is related to a method of emulating the 10 effects of color correction on different display devices 11 during post-production. 12 What is post-production? Post-production is the 13 content creation process. The patent also talks about that 14 separately, it's a commonly known concept, post-production 15 is part of the content creation process. 16 As I went over earlier today, your Honor, the 17 specification also repeatedly and consistently explains the 18 difference between content creation and content display. 19 So again, this is all just getting to the point that the 20 withdrawn application claims, those are not relevant to 21 asserted claim 14 here, at least not relevant to this 22 dispute that we're having. 23 Let me stop there, your Honor, take any 24 questions. 25 JUDGE BHATTACHARYYA: No questions at this time.
Page 219 1 For example, let's say the further processing 2 mentioned here, let's say it's dimming a movie, an entire 3 movie. The preprocess version of that movie is still 4 independently renderable, it would just be brighter than 5 the processed version, which would be dimmer, that's all. 6 This argument from Complainants' rebuttal brief, 7 it is not correct, your Honor. 8 Complainants also argue that we, Respondents and 9 Intervenor, are improperly importing withdrawn application 10 claims 18 and 23 into the claims here. So, your Honor, 11 these are claims that were withdrawn during prosecution. 12 They are not claims that are in the patent. And the point 13 that Complainants are making here is that these claims 14 recite the words "making several versions of a feature." 15 They say because these claims say that, those words, and 16 those words are not in the asserted claim, then the 17 asserted claim can't include that concept. 18 That's not correct, your Honor. These withdrawn 19 claims have no bearing on asserted claim 14. These are 20 drawn claims were about how to create content. This is the 21 content creation side we discussed earlier. That's 22 completely different than the content display side, which 23 is what claim 14 is directed to, the content display side. 24 In case there's any confusion about it -- or I 25 guess I should put it this way, the examiner had the exact	Page 221 1 Thank you. 2 MR. CHU: Thank you. 3 MR. LAREAU: May I proceed, your Honor? 4 JUDGE BHATTACHARYYA: Yes, please go ahead. 5 MR. LAREAU: Stephen Lareau for the Complainant. 6 I want to just start where Mr. Chu just left off with 7 respect to the Doser and Bogdanowicz references. We'll 8 circle back to the end. But I want to be very clear, what 9 we just spent a lot of time going through the claims and 10 figures of other patents, that's not the '751 patent, 11 that's not a parent patent, not a related patent. Those 12 are just wholly separate pieces of extrinsic evidence 13 they're trying to read limitations in from. That's 14 something I want to make abundantly clear before we move on 15 and we get to it again whenever I get to the end of my 16 slide presentation. 17 I'm going to breeze through the sort of 18 background that Mr. Chu covered, just in the interest of 19 time and given where we are on Friday afternoon. But one 20 point I want to make very clear is that there are two sides 21 to this equation. There's the content creation side, and 22 there's the display side. And on the content creation 23 side, there's a lot of discussion in the patent about 24 creating multiple versions of films and certain embodiments 25 to create virtual device models.

Page 222 1 You don't see those same statements on the 2 specification on the display side. And Mr. Chu is correct, 3 there was a restriction requirement that occurred during 4 prosecution based on the content creation side, the color 5 grading side, and the display side. 6 The '751 patent is a display patent, and so what 7 you saw just now were citation after citation of places 8 from the specification that talk about the content creation 9 side. So I just want to put that out there and you will 10 see it in their briefing. 11 So let's talk a little more specifically about 12 the actual dispute. So the dispute is whether each of the 13 claimed picture data can only include data that can be 14 independently rendered into an image on a display. That is 15 the dispute, is whether it can be independently rendered. 16 In other words, it's pixel data, independent pixel data 17 that can be rendered into a display. That's what they're 18 limiting it to. 19 The question you're probably asking yourself 20 what is it that they're excluding that you don't want to 21 exclude. And that's really the heart of this whole 22 dispute. They are trying to dispute -- or exclude the 23 corrective information that is associated with a virtual 24 device model that is discussed throughout the 25 specification. It's the whole point of the invention.	Page 224 1 like you both agree on what the dispute is. 2 MR. LAREAU: Yes, absolutely. 3 JUDGE BHATTACHARYYA: Mr. Chu is describing it 4 as metadata and you're describing it as data that comes 5 with the virtual models. 6 MR. LAREAU: Right. That is -- well, that is 7 correct, your Honor. They chose the word "metadata." That 8 is not our term. That is how they are using -- a straw man 9 they have created to describe corrective information 10 described in the patent. The patent calls it correction 11 information or corrections. I call it correction data. 12 And we'll go through some examples of what that looks like 13 in the specification and where it describes that. 14 But that is -- that is what is picture data in 15 association with the base image that comes in. So you have 16 a base image that comes in, and then you adjust it for the 17 display. That's the patent. That's -- that is the 18 solution to the problem that the patentee was trying to 19 solve. 20 So I think it's helpful if we just turn and look 21 at the claim. The term "plurality of picture data" 22 actually occurs many more places than Mr. Chu identified. 23 But we see what does the patent tell us about the plurality 24 of picture data? Because again, I want to take a step 25 back.
Page 223 1 The whole point of this invention is that you 2 have virtual device models that are created ahead of time, 3 you send those virtual device models to a display, the 4 display can pick the virtual device model that best 5 corresponds to that display, and then it can utilize the 6 corrective information, which is picture information or 7 picture data, to render the base image that is also 8 present. That's the invention. 9 So I want to just be -- if you have any 10 questions about this, this is a great place to stop and 11 just answer the questions about whether that's picture 12 data, because that is this entire dispute. I have more 13 slides, I'm going to go through it, but that is the dispute 14 as to whether -- I'll give you an example, a numerical 15 example and kind of simplify things. 16 Let's say you have a base image that comes into 17 a display that has a red pixel value of 70. I'm just 18 picking arbitrary numbers. And you also have a virtual 19 device model that's associated with that display that that 20 display has chosen that says red plus 5. And then the TV 21 uses that plus 5, uses that 70, and renders 75. 22 The 70 and the plus 5 are both picture data. 23 They are -- it is data that is literally used to render the 24 picture. And that's what they're trying to exclude. 25 JUDGE BHATTACHARYYA: I think you -- it sounded	Page 225 1 They're arguing that this is the plain and 2 ordinary meaning of this term, but we're going through a 3 lot of effort to go to all sorts of different sources to 4 try to figure out what that alleged plain and ordinary 5 meaning is. And a lot of this seemed like disclaimer and 6 lexicography to me and not just a litigation-inspired plain 7 and ordinary meaning construction. 8 Let's actually look at the claim. The claim 9 says you process the plurality of picture data, but the 10 display unit does that. We've agreed this preamble is 11 limiting. And then you have a picture selector that 12 obtains the plurality of picture data, and that picture 13 selector selects one of the plurality of picture data, and 14 then you have a picture calibration component that adapts 15 the selected one of the picture data. 16 That is what the claim says about the plurality 17 of picture data. 18 Later it says that you adapt it to be displayed. 19 The word "render" does not appear in this claim. That is a 20 word that they are trying to inject into this claim. They 21 are trying to say you must render -- you must have 22 renderable pixel data. That just doesn't exist in the 23 claim. 24 When we start, you know, under Phillips we're 25 going to start with the claim. That's what the claim says.

Page 226 1 It is not counsel in favor of their construction. 2 So it's clear, some of the misconceptions about 3 virtual device models. The patent teaches us that virtual 4 device models can contain all sorts of different 5 attributes. And so we see here in figure 1 we have a 6 virtual device model specification, and then there's a 7 bunch of attributes below it, things like color gamut, 8 contrast ratio, spatial resolution, display brightness, all 9 manner of different aspects of an image. 10 Those are attributes. 11 But the specifications are distinct from -- and 12 the attributes are distinct from the corrections that 13 are -- the corresponding corrections. So if you have, say, 14 a TV, I'm going to use brightness for example, we'll move 15 away from color, because brightness is a little simpler to 16 understand. 17 Say you have a TV that has a brightness of 1000 18 nits, pretty bright TV. That TV is going to look at the 19 virtual device model and say I'm going to look for the 20 virtual device model that's closest to my 1000 nit TV. So 21 I see the 1000 nit one. I'm going to look at the 22 attributes that are there and what is the corresponding 23 correction data that the patent discloses that corresponds 24 to those attributes. 25 That correction data is picture data because it	Page 228 1 the patent that says this is one way that this could be -- 2 this technology could be implemented, okay. 3 And so you didn't see anything and he didn't 4 present anything that said this is what picture data means. 5 Picture data means multiple versions of a film are coming 6 in from picture source device. 7 What does it actually say about the picture 8 source device? It says "a picture source device provides 9 picture data for all virtual device models." We know 10 that's true because it has to send the virtual device 11 models with the corrective information to the display. 12 It's sending all of -- if there's n number of virtual 13 device models, then there's n sets of picture data. For 14 every virtual device model, there's corresponding 15 corrective data. That's what this is saying. 16 They're twisting it to make it believe that you 17 must create five versions of the Odyssey and send it to 18 your TV and then you pick between the five versions of the 19 Odyssey. 20 The patent doesn't say that. If it said that, 21 he would have showed you a passage that says that. It 22 doesn't. 23 Moreover, the patent -- this portion of the 24 specification goes on to say that it then selects a picture 25 data set out of the picture data sets for display or for
Page 227 1 affects the picture. And that's what the patent tells us. 2 We see here at column 9:8-13, "the plurality of 3 virtual device models can be created, each representing a 4 display attribute and a correction needed for each display 5 attribute to present a picture that is acceptably similar" 6 to the first reference display. 7 Again, that's the whole goal of this patent is 8 that we're going to send you some information based on sort 9 of a hypothetical display technology or hypothetical 10 display capability that you can utilize to best adapt your 11 image to match what the artist intended. 12 So the patent also gives us examples of what 13 this kind of correction information looks like. So we have 14 such corrections can include things like gain, offset, 15 power, it can include hue and saturation. You can include 16 changes to brightness, hue, saturation, for just some 17 colors but not other colors. So it gives a lot of examples 18 of the kinds of things that someone might use to correct an 19 image to make it better display on a reference display. 20 And that's what we see here on slide 171. 21 Now, Mr. Chu spent a lot of time talking about 22 figure 7 and its corresponding text in the specification. 23 I want to address a few points there. The first, figure 7 24 is one embodiment. It's not the only embodiment. It's not 25 even the preferred embodiment. It's just an embodiment in	Page 229 1 further processing. 2 What does the patent teach us about the "or 3 further processing" or what does the claim teach us rather? 4 The claim has a picture calibration component in it. 5 That's the last limitation of claim 14, the claim that's 6 asserted here that matters in the context of this term. 7 It tells us there that you would then use the 8 picture calibration block or picture calibration component 9 to adjust the image in view of this corrective information. 10 So based on that, why would the patentee have 11 written in a limitation that the picture data already be 12 renderable if they're going to go do further processing on 13 it? It just doesn't really make sense. And it certainly 14 doesn't support the conclusion that the Respondents and 15 Intervenor tend to think that it does. 16 Now, they have made a lot of the idea or the 17 notion that there's no teaching in this patent whatsoever 18 that there is an embodiment where there's one version of a 19 film that it sent. And I want to dispel that really 20 quickly, because that became very clear during -- through 21 the rebuttal brief and then through the presentation today. 22 All right. Your Honor, this is from column 10, 23 lines 57 through 67. And I've highlighted two different -- 24 this is of the '751 patent. And I've highlighted two 25 different portions here.

Page 230 1 "In an alternate embodiment of the present 2 invention, color correcting for primary mainstream display 3 can be performed and specifications can be slightly 4 modified for individual secondary display classes." 5 "Alternatively" -- we see in another embodiment, 6 "Alternatively, several versions of a movie can be made and 7 color corrected for individual virtual device models, and 8 made available for viewing." 9 We see two different alternative embodiments, 10 one talking about multiple versions of a feature, another 11 one talking about one primary stream. So we have one 12 stream going out, and we have another embodiment that's 13 distinct, the patent tells us is an alternative embodiment, 14 where you have multiple versions. 15 So the notion -- and the patent is not really 16 directed -- like the specification is not specifically 17 directed to the notion of content delivery. That is not 18 really the focus of it. It's really display and creation. 19 The pipe in the middle isn't the focus of the 20 invention so they didn't spend a lot of time talking about 21 that. 22 But this right here tells you that there is a 23 world where -- or an embodiment of this patent where you 24 have one stream that is sent to a display. 25 Moving on, your Honor, to slide 173. This is	Page 232 1 say that. 2 It says that you create those in the process of 3 creating the virtual device models. This is just simply 4 not in claim 14. If you actually go back to the claims, 5 the claims do not require this. 6 I mentioned this earlier. There was a 7 restriction requirement during prosecution addressing the 8 duality of the kind of sides of the specification, the 9 creation side and the display side. 10 What we see here, these are the withdrawn claims 11 that Mr. Chu also showed that recited adjusting includes 12 making several versions of a feature. And this again is 13 content creation side. These claims do not exist in the 14 '751 patent. These claims were withdrawn. 15 But the patentee knew how to claim making 16 multiple versions of a feature, and that's not in claim 14. 17 And there's no requirement in claim 14 for receiving 18 several versions of a feature. Those words just don't 19 appear. And there's no reason, no justification, under the 20 guise of plain and ordinary meaning, to inject that. 21 I want to briefly talk about the prosecution 22 history and the references that were cited during 23 prosecution, your Honor. The first one is the Itakura 24 reference. And a little bit of understandings about 25 Itakura is necessary I think to fully understand what the
Page 231 1 what I mentioned earlier about the creation side and the 2 display side. 3 If you look at the citations, you saw many, many 4 citations about how many versions of a feature could be 5 created on a creation side. But we know that when you 6 create a version of this feature, you create a virtual 7 device model. 8 None of those embodiments say you then send 9 eight versions of the feature to the display. That's not 10 in any of this description. And they want to focus on the 11 content creation side because they think it's helpful to 12 them, but they don't want to focus on the content display 13 side. 14 I don't want there to be any confusion that the 15 content display side and the content creation side are 16 wholly distinct from each other. 17 I also want to point out that this quote on the 18 top right, they cited this in their briefing, and I believe 19 they cited it again in their presentation today, at the end 20 of the method of color correction in figure 2, there will 21 be n video masters for n display groups represented by 22 respective virtual device models determined at step 208. 23 They cite this quote from the specification to 24 argue that there must be multiple versions of a film that 25 are sent to a display. It's just not true. That doesn't	Page 233 1 patentee said, and I don't think anyone has explained this 2 to you yet so I want to take a moment to do that briefly. 3 Itakura is a content distribution patent, so 4 it's a patent sort of about that middle layer that the '751 5 patent particularly focused on. But what it's saying and 6 what -- the system of Itakura, it's about packetizing 7 different amounts of data so that a terminal only receives 8 the amount of data that it needs to display the image that 9 it can support. 10 I'll give you an example. 11 So you have something that is picture of lowest 12 quality on the far top right of figure 8 here on the slide 13 176. That is -- say that's a cellphone and it has the 14 lowest quality, lowest bandwidth, whatever the driver is. 15 So it's going to ask the server, I need quality 1, so it's 16 just going to get packet 111-1. 17 Then the next one is a tablet, it's a little bit 18 better, and it can get -- it needs quality 2, so it's going 19 to get packet 1 and packet 2. So it's a layered encoding 20 method of transmitting data. That's what Itakura is. But 21 every one of these devices on the right side of Itakura, 22 they only ever receive one bit stream and one -- there's no 23 corrective data. There's no virtual device model-like 24 corollary. It's just here's your image. 25 Now, they chop it up in what they believe is a

Page 234 1 unique way in Itakura, but that has nothing to do with what 2 this patent is about. 3 With that background, let's take a second to 4 reread what the patentee said during prosecution. 5 "The display terminal of Itakura is actually 6 only able to receive and process one and only one display 7 picture and has one and only one set of display 8 specifications." 9 This isn't a situation, excuse me, where the 10 terminals of Itakura is saying, hey, I'm going to pick 11 between these three tweak -- you know, modification or 12 adjustment variables based on some local specification of 13 my display. They're saying, hey, I need version 3 and then 14 they just get version 3 and that's the end of it. And 15 that's the distinction that the patentee was making during 16 prosecution. 17 Therefore, each of the user display terminals of 18 Itakura clearly does not receive or process multiple 19 picture data or have multiple -- plurality of virtual 20 device models. 21 Nothing that the patentee said in the 22 prosecution of Itakura is inconsistent with the position 23 I'm taking now or the correct interpretation of the plain 24 and ordinary meaning of plurality of picture data. 25 I'm going to turn to Doser. These are the	Page 236 1 picture data. To characterize this as us likening certain 2 aspects of Doser with other aspects is flatly wrong. 3 Moreover, the term "plurality of picture data" 4 did not exist in the pending claims at the time these 5 statements were made. They didn't come for another two 6 years. This was the pending version of the asserted claim 7 at the time Doser was discussed. It doesn't say plurality 8 of picture data. This was in 2014. 9 I want to talk about Bogdanowicz a little as 10 well. So Bogdanowicz suffers from the same fatal flaw as 11 Doser with respect to the plurality of picture data, so 12 I'll start where I just left off. Plurality of picture 13 data was not in the claims when Bogdanowicz was being 14 discussed. 15 But also interestingly, they didn't even provide 16 your Honor with any statements from the patentee about the 17 pending claims with respect to the scope or teachings of 18 Bogdanowicz. They submitted an office action. They didn't 19 submit any responsive correspondence from the patentee 20 talking about the claim scope. It's just not there. 21 There's nothing to support reading another 22 patent, another patentee's applicants' unrelated 23 description of metadata to now try to decide what plurality 24 of picture data in the context of the '751 patent means. 25 There's one last point I'd like to make on this.
Page 235 1 references that I was talking about when I first started 2 that these are not -- those are not related patents, but -- 3 and they're not -- there's nothing that was shown to you 4 today about a statement that was made by the patentee 5 regarding these references. They are treating these wholly 6 as just pieces of extrinsic evidence to try to tell you 7 that this -- to try to convince you that this is a -- that 8 there's some sort of distinction that the '751 patentee 9 believed about metadata or picture data. That's quite a 10 leap. But let's just look through it. 11 First of all, I do want to correct one thing. 12 Their opening brief absolutely mischaracterizes what was 13 said about Doser during prosecution. It starts on page 48, 14 it goes for almost a page and a half. I highly suggest you 15 read it, because it appears to be completely hallucinated. 16 This is what the patentee said about Doser in 17 prosecution that was cited. Now, it looks like a lot, but 18 everything that I just blacked out, that's just a quote 19 from Doser, that's just the summary. That is literally 20 just the summary quoted. 21 So Doser is seemingly concerned with the summary 22 of Doser. "In this way, Doser is related to the scope of 23 the present amended claims but also very different." 24 There is nothing substantive that was discussed 25 about Doser in prosecution with respect to the plurality of	Page 237 1 This is Respondents' slide M7.60. If we see down here in 2 the highlighted portion, we see metadata and image pixels. 3 What we don't see, picture data. 4 They're trying to use -- they're trying to 5 equate picture data to image pixels using this extrinsic 6 evidence. That's wholly improper. There's not a statement 7 in here that says metadata is not picture data. They're 8 saying that it treats metadata and pixel data separately. 9 Okay. That has no bearing on the proper interpretation of 10 the '751 claims. 11 With that, your Honor, I'm happy to answer any 12 questions that you may have. 13 JUDGE BHATTACHARYYA: Just one question. I felt 14 like one of Respondents' arguments was that the claim 15 language itself talks about displaying picture data, and 16 that therefore, picture data must be pixel data as opposed 17 to correction data because correction data isn't displayed. 18 Can you respond to that? 19 MR. LAREAU: Absolutely. So again, our 20 understanding of the plurality of picture data is that it 21 includes, it's inclusive of a base stream, a base set of 22 pixel data, in addition to multiple sets of correction 23 data. 24 And so you are displaying the base stream in 25 combination with the selected correction values.

Page 238 1 JUDGE BHATTACHARYYA: Understood. Thank you. 2 MR. LAREAU: Absolutely. Thank you, your Honor. 3 MR. CHU: Your Honor, I know we're getting close 4 to 5:00 so I'm going to try and make this as quick as I 5 can. Appreciate the patience. 6 So first let me start off by addressing a point 7 counsel for Complainants made. He said something along the 8 lines of the various prior art that we had showed earlier, 9 that these are all extrinsic evidence, they're not part of 10 the intrinsic record. 11 That's not correct, your Honor. These are all 12 references that are part of the prosecution history, so 13 they are part of the intrinsic record. 14 Again, I just want to reiterate, the point of 15 those references, like Doser, Bogdanowicz, we're not saying 16 that there's -- that the applicant made some kind of 17 disclaimer or lexicography or whatever you have. 18 The point is that these are references that were 19 around and coming from the same inventor as we have in the 20 '751, references that are around to show what people of 21 skill in the art understood to be metadata versus actual 22 image data, that the metadata helps alter. That's the 23 point of those references. That's the point we're making 24 there, your Honor. 25 Now, counsel for Complainants mentioned the term	Page 240 1 they have "each representing a display attribute and a 2 correction needed," suggesting that this refers to 3 correction data or something like that. 4 Now, let's take a look at what this paragraph 5 says. 6 So here, your Honor, I've tried to highlight 7 very quickly the entirety of -- I highlighted the specs 8 that they showed, lines 8 to 13. If we read it, it says 9 "as such, a plurality of virtual device models can be 10 created, each representing a display attribute and a 11 correction needed for each display attribute to present a 12 picture that is acceptably similar to the picture displayed 13 on the first reference display." 14 So what is this talking about? This is talking 15 about making the virtual device models. That's the content 16 creation side. This is making the device models and then 17 making a movie tailored to that device model. 18 When it says "the first reference display," that 19 is the display the content creator uses to see if when 20 they're doing the color correction, to see if the image 21 looks as they intend on another display. 22 Let's see, they also pointed you to column 10. 23 Here where it says column 10, "in an alternate embodiment 24 of the present invention, color correcting for a primary 25 mainstream display can be performed and specifications can
Page 239 1 "correction data" several times. As far as I can tell, the 2 term "correction data" doesn't appear anywhere in the 3 patent. The patent certainly doesn't say correction data 4 is picture data. 5 A lot of this -- I can pull some of these up. A 6 lot of these spec cites that we saw from Complainants' 7 counsel, your Honor, those are referring to the content 8 creation side. We don't dispute that on the content 9 creation side, yes, you do color correct. That's the whole 10 point of content creation. An artist makes a version of 11 the video, and then they will make various virtual device 12 models like we saw earlier, virtual display models -- I'm 13 sorry, and for each individual virtual display model, they 14 will make a separate version of the video to match the 15 virtual display model. That's what color correction is. 16 Again, that's all in the content creation side. It's not 17 about content display. 18 Now, since we have a little bit of time, let me 19 address some specific examples, if your Honor is okay with 20 it, of the specs that they show, and we'll see what those 21 cites are referring to in context. And let me see if I can 22 do this right, this projector. Let's see. 23 So I think this was one of the first -- maybe 24 the first specification cite counsel for Complainants 25 showed. The '751 patent, column 9, lines 8 to 13. Here	Page 241 1 be slightly modified for individual secondary display 2 classes." 3 I think it was counsel's suggestion that this 4 passage says on the content display side you have one movie 5 and you're correcting it to make multiple movies. That's 6 not what this passage is saying, your Honor. 7 If we take -- just plain language doesn't say 8 that, but let's take these terms in this sentence and see 9 what they mean, because they're defined elsewhere in the 10 specification. 11 For example, it says "a primary mainstream 12 display." What is that talking about? Let's take a look. 13 So right in the beginning of the summary of the invention, 14 it uses that same term, "primary mainstream display." It 15 says "the color correcting process." Again, it talks about 16 the color correcting process, content creation side. 17 "The color correcting process can be performed 18 for primary mainstream displays and for secondary display 19 classes or particular conditions to create a plurality of 20 virtual device models." 21 So this is all talking about how to make the 22 virtual device models. When it says "classes of displays," 23 what is that referring to? That's referring to what I 24 mentioned earlier, wherefore each virtual device model, it 25 will roughly correlate to some number of displays on the

Page 242 1 market. So this is the middle ground approach the patent 2 took so you don't have to make literally a separate version 3 of the video for every possible display because there's too 4 many. They have classes of displays. You can see that 5 right here in column 4 where I have highlighted, this is 6 lines 8 through 14 or 15. 7 "A method for color correction includes 8 representing a display or a class of displays on which 9 content is to be displayed by generating at least one 10 virtual device model for color correction, adjusting the at 11 least one virtual device model for color correction for the 12 display or class of displays by emulating representative 13 displays for proof viewing." 14 So this is explaining what I just discussed, 15 your Honor, for each class of device models, there is a 16 virtual display model -- keep getting this mixed up, 17 virtual display model for each class of devices, for each 18 class of displays. That's what it's referring to. For 19 each one, you make that separate version of the source 20 media. 21 Given the time, your Honor, I won't go through 22 the rest of the cites, but I want to address one point, 23 which is the further processing point because counsel for 24 Complainants raised that again. 25 They say there's a calibration component, first	Page 244 1 device model is built for 200 nits. So the display might 2 still pick this virtual device model because it's the 3 closest match because 11 of the 12 parameters match 4 perfectly, but one parameter is off and that's the display 5 brightness. 6 What happens, what the display has to do is it 7 has to do further processing to make sure that it can still 8 display that image under its own capabilities, under its 9 own limitations, which is 100 nits. So it has to do 10 further processing to adapt the image to fit a 100 nit max 11 as opposed to the 200 nit maximum that the VDM, the virtual 12 device model, may have. It has to do that because if you 13 don't, the image will get very washed out and every pixel 14 above 100 nits, it will basically just be white. You don't 15 want that to happen. 16 That's the reason there's further processing. 17 That's the point of the claimed -- I'll find the right 18 language, the claimed picture calibration component. 19 That's what that is doing. The picture calibration 20 component, to be clear, is not a component in the device 21 that is now making multiple versions of that one movie. It 22 can't make a tweaked version of that that came in for 23 further processing purposes, but it's not doing the content 24 creation side, where they're making multiple versions, each 25 tailored for the separate VDMs that the creator is making.
Page 243 1 the spec mentioned in figure 7 the calibration component, 2 it's optional. So just as an initial matter, what does 3 that indicate, is that the picture data that is not 4 calibrated that's still picture data, it's still something 5 that can be rendered, because if there's no calibration 6 component, if it's optional, it means the picture data 7 itself is already renderable. 8 Putting that aside, what's an example of further 9 processing that would actually take place on the display 10 side and why would this happen? This happens because if 11 you have a virtual device model that relates to a large 12 range of displays on the market, okay, and then by the time 13 that the source media gets to you, let's say the movie, it 14 gets to your display or the movies get to your display, the 15 display needs to figure out which version of this movie to 16 play. That's what figure 7 showed. It has a plurality of 17 picture data, it selects one, that's a picture selector. 18 Why would it still undergo further processing? 19 The reason is because the display may not match exactly 20 with the virtual device model. 21 For example, we saw figure 1. Figure 1, here 22 you can see a virtual device model has 12 different 23 parameters. So let's say you have a display where 11 of 24 the 12 parameters match perfectly, the only parameter 25 that's off is the display goes up to 100 nits, the virtual	Page 245 1 I'm sorry, your Honor, I went past 5:00, I 2 apologize. I'll stop there. 3 JUDGE BHATTACHARYYA: That's fine. Thank you 4 very much. 5 Do you have any very brief rebuttal? 6 MR. LAREAU: Extremely brief, your Honor. 7 JUDGE BHATTACHARYYA: Okay. 8 MR. LAREAU: Thank you, your Honor. Stephen 9 Lareau. 10 They are arguing for importing a limitation from 11 embodiments from an unelected restricted portion of the 12 specification to try to get it to be read into the claim. 13 That is a cardinal sin of patent law, as Dr. Tsui explained 14 earlier this morning, and that is something that we believe 15 this Court should actually reject. 16 With that, I'll leave it there. 17 JUDGE BHATTACHARYYA: Okay. Thank you. 18 MR. LAREAU: Thank you. 19 MR. CHU: Nothing further, your Honor. I've 20 addressed that point. 21 JUDGE BHATTACHARYYA: Thanks, everybody. This 22 is very complex technology. I appreciate all the helpful 23 presentations. Once the updated claim chart comes in, I'll 24 take these under advisement. 25 Please file your demonstratives on EDIS. I like

Page 246

1 to have them filed for a complete record. Is there
2 anything else we need to address today?
3 MR. STEVENS: Nothing from Complainants, your
4 Honor. Thank you for your attention. It's been a long
5 day, and we thank you for listening to us go through all
6 eight terms.
7 MR. CHU: Nothing for Respondents and
8 Intervenor. Thank you, your Honor.
9 JUDGE BHATTACHARYYA: Thank you very much. Hope
10 everyone has a good weekend.
11 (Whereupon, at 5:06 p.m., the Markman Hearing was
12 concluded.)
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Page 247

1 CERTIFICATE OF REPORTER
2 Certain Video-Capable Electronic Devices, Including Smart
3 Televisions, Monitors, and Components Thereof
4 INVESTIGATION NO: 337-TA-1495
5 HEARING DATE: 09-11-26
6 LOCATION: Washington, DC - In Person
7 NATURE OF HEARING: Markman Hearing
8 I hereby certify that the foregoing/attached
9 transcript is a true, correct and complete
10 record of the above-referenced proceeding(s) of
11 the U.S. International Trade Commission.
12 DATE: 09-11-26
13 SIGNED: Mark A. Jagan
14 Signature of the Contractor or the
15 Authorized Contractor's Representative
16
17 I hereby certify that I am not the Court
18 Reporter and that I have proofread the
19 above-referenced transcript of the proceedings
20 of the U.S. International Trade Commission,
21 against the aforementioned Court Reporter's
22 notes and recordings, for accuracy in
23 transcription in the spelling, hyphenation,
24 punctuation and speaker identification and did
25 not make any changes of a substantive nature.
The foregoing/attached transcript is a true,
correct and complete transcription of the
proceedings.
SIGNED: Christopher Weiskircher
Signature of Proofreader
I hereby certify that I reported the
above-referenced proceedings of the U.S.
International Trade Commission and caused
to be prepared from my tapes and notes of
the proceedings a true, correct and
complete verbatim recording of the
proceedings.
SIGNED: Carmen Smith
Signature of Court Reporter

A			
a.m 1:25 7:2 abbreviation 112:3 122:10 abbreviations 122:12 ability 170:12 able 65:19 68:13 116:7 154:11 157:16 173:18 173:19 174:8,10,14,18 175:16 200:4 201:9 214:9 234:6 above-referenced 247:6 247:10,17 absence 74:11 absent 84:17 129:25 absolute 87:9 absolutely 91:11 99:20 224:2 235:12 237:19 238:2 abstract 153:3 abundantly 221:14 accept 192:5 acceptably 227:5 240:12 accepted 171:19 accomplish 114:23 accomplished 113:19 accords 119:22,23 account 58:25 95:15 117:8,9 141:4,18 accuracy 247:12 accurate 46:18 accused 72:20 73:6 achieve 106:12 117:11 174:18 198:12 acknowledge 100:6,13,15 147:20 176:3 acknowledged 143:22 acknowledges 146:5 acquired 71:4 act 76:7 111:19,21 action 38:12 59:17 131:3 214:13 220:8 236:18 actual 76:15 88:7 93:12 101:12 155:12 164:22 206:2 209:5,5,23 217:15 222:12 238:21 Adam 2:5 7:16 adam.swain@alston.com 2:11 adapt 80:12 84:14 86:3 88:15 182:18 225:18 227:10 244:10 adaptation 73:9,20 74:25 75:2,14 76:10,11 79:10 86:7,22 87:25 88:12 adapted 53:16 57:7 58:20 64:20 67:2,22 73:16	74:1 77:12 79:11,12 81:15 83:10 85:19,22 86:17 90:8 163:17 adapting 84:14 adaption 89:21 90:2 adaptive 95:14,14 adapts 75:11 79:5,6 84:13,24 86:8,11 87:2 88:17 208:3 225:14 add 16:19 31:22 45:10 79:16 83:20 91:4 116:23 131:24 136:2 137:17 159:17 162:4 164:15 168:6 179:21 193:16 added 113:5 129:5,6,7,9 129:16 130:20,21,22,25 132:3 145:16 146:19,22 163:23 167:23 168:9 adding 75:20 77:2 88:6 90:21 141:7 176:14 addition 113:16 218:1 237:22 additional 27:16 35:15 67:16 75:22 175:11,12 185:15 211:16 address 15:16 31:25 32:4 41:19 48:9,9 66:25 68:19 146:19 161:1 196:7,11 217:25 227:23 239:19 242:22 246:2 addressed 98:23 103:21 245:20 addresses 74:9 77:12 81:22 87:25 96:7 addressing 78:10 95:1,12 167:21 232:7 238:6 adds 84:7 172:11 adjacent 28:21 adjust 174:6 209:19 211:7 224:16 229:9 adjusting 85:2 232:11 242:10 adjustment 209:12 210:21 211:6,9,11,14 234:12 Administrative 1:4 admit 20:4 admittedly 50:14 adopt 104:8 adopted 43:22 47:4,9 48:8 104:5 adopting 56:3 140:23 advantage 11:10 99:17 99:20 140:23 advantageously 113:12 adverbs 111:17	advisement 245:24 advisor 7:7 advocated 163:19 aforementioned 247:11 afternoon 106:21 134:1 158:15 180:6 221:19 ago 26:13 105:23 117:18 141:22 161:14 196:5 agree 44:23,25 74:14 86:6 95:6 111:10 117:14 144:10 149:17 150:6 166:3 172:4 180:21,22 188:10 191:22 195:10,20 196:17 224:1 agreed 114:19 180:25 190:16 192:25 225:10 agreement 170:4,7 ahead 9:9 81:19 83:12 84:23 87:15 180:12 190:11 197:10 221:4 223:2 Albert 110:21,24 111:1 119:12 alert 201:20 alerting 201:20 algorithm 190:17,18,21 aligns 70:6 185:5 ALJ 7:6 74:19 89:9 alleged 178:10 225:4 alleging 215:9 allocating 69:13 allow 11:10 72:20,20 88:14 162:1,7 172:9 173:6 214:25 allowable 60:1 allowance 26:14 39:3,5 40:5 48:4 60:2 73:18,19 132:16 allowed 29:16 129:25 allows 10:16 37:14,23 98:11,25 100:3 214:25 already-formed 70:7 Alston 2:6,15 3:5,14 4:5 7:11 alter 209:13 238:22 alternate 8:19 109:11 230:1 240:23 alternative 77:25 154:25 155:15 176:21 230:9,13 Alternatively 230:5,6 Alto 5:7 altogether 195:25 Alvarez 19:17,21,22,25 20:7 26:17 27:17 28:12 35:1 Amazon 151:11,16	Amazon's 151:15 ambiguity 15:14 22:17 104:15,18 145:8 208:18 ambiguous 59:10 133:1 amenable 25:3 amended 73:8,14 131:24 235:23 amendment 130:9,15 131:10,23 132:23 133:4 amendments 168:9 Ames 7:7 amount 10:14 233:8 amounts 233:7 Amy 7:7 analogy 45:2 analysis 27:25 71:1 analyzer 19:18,19 and/or 38:7 108:7 Andrea 8:6 ANDREW 2:14 Andy 7:12 andy.ligotti@alston.com 2:19 announcing 74:21 answer 23:2 35:10 47:11 71:13 74:19 89:12 142:25 143:5 178:9 180:2 191:25 194:6 223:11 237:11 answered 108:4 168:14 antecedent 123:24 124:1 antenna 204:22 205:3 anymore 63:16 167:1 Anzalone 4:13 8:2 106:21 133:14 134:2,4,11,16 134:19,23 136:14 137:12 138:11,17,20 139:1,13 141:1 142:9 142:13,15 143:13,16 144:20 150:6 Apologies 154:12 apologize 23:9,9 44:9 60:18 66:8 119:25 245:2 apparatus 38:18 71:15 83:13 90:11,23 Apparently 68:8 appear 104:12 105:6,16 114:7 119:21 167:10 185:21 186:6 209:2 225:19 232:19 239:2 appearances 2:1 3:1 4:1 5:1 6:1 7:9 appeared 167:9 appears 70:21 105:20 107:11,15,17 120:8 121:11 122:20 123:9

129:19 130:3 152:1 155:3 156:7 235:15 applicable 76:13 215:17 applicant 17:15 18:17 19:16,20 20:15 21:19 25:21,24 26:9 27:7,11 27:12,17,18,21 29:6,15 29:22 31:6 38:5,10,11 38:20 39:6 42:19 48:14 59:18 132:7 167:13,19 177:1 214:14 238:16 applicant's 21:18 22:6 28:10 29:1,18 38:21 40:4 48:3 167:11 214:13,24 215:7 applicants 18:7 21:2 22:4 27:10 34:2,25 43:16 51:4 73:8,14,16 129:16 131:24 163:23 167:5 214:6,6,21 applicants' 167:7 236:22 application 35:23 91:3 93:12 130:1,6 132:18 147:10 215:20 216:5,6 219:9 220:20 application's 39:4 applications 9:22 132:21 applied 38:10 70:14 83:4 86:16,20 94:23 95:7 98:14 100:18 101:18,24 102:6 103:8 104:3 106:6,25 107:11,13 113:1 120:3,5,13 121:6 122:20 123:9,11,12 125:9,10 128:2 129:16 129:23 131:25 132:2,7 132:10 146:17,21 148:16 176:8,25 177:13 178:22 211:7,10,14 214:24 applies 59:9 71:16 106:14 119:12 127:13 apply 91:1 116:21,22 121:5 135:13 137:5 applying 59:10 101:5 103:25 120:16 145:18 149:20 appreciate 238:5 245:22 approach 22:1 23:5 66:5 68:17 147:18 180:11 201:11 202:8 216:10 242:1 appropriate 90:23 April 131:2 arbitrarily 137:21 arbitrary 108:17 186:12 223:18	architecture 102:21 architectures 16:25 17:1 area 123:1 arguably 181:14 186:25 187:8,10,11,13,20 argue 46:15 50:10 60:1 73:25 102:18 123:1 145:21 156:13 157:16 157:23 169:23 186:11 186:11,14 187:2 190:16 190:20,24 218:8 219:8 231:24 argued 31:7 59:22 113:5 129:17 132:9 arguing 71:25 78:24 144:14 156:8 168:3 191:6 196:13 225:1 245:10 argument 21:10 26:15 28:18 58:2 66:4 75:21 94:15 103:3 124:3 132:22 146:19 150:20 175:25 176:1 186:16 188:7 218:11,12,17 219:6 arguments 15:9,16 27:16 31:1 48:3 84:24 151:21 217:25 237:14 arises 96:13 arms 114:14 arrangement 100:16 arrive 99:15 arrow 12:11,16 187:17 187:18 art 13:16,18 17:15 18:6 18:10,12,14 19:13,16 19:22 20:1,8,11 22:7,22 23:25 25:22 26:7,18 27:11,18 28:6 29:11,16 30:7,9,11 31:11,15,16 32:10,15 33:5 34:2,8,17 34:22 36:4,6 39:8 42:12 42:15,20 46:17,19,23 49:4 50:20 51:15 56:14 73:17 81:14 82:11 93:15 96:15 97:23 98:7 98:22 100:8 113:24 123:15 130:1 131:14,23 133:8 146:19 147:20,21 147:25 163:25 164:2 167:13 215:3,11,12 217:1,13 238:8,21 articulation 105:4 artifact 78:5 79:7 91:23 artifacts 80:3 81:9 82:2,6 82:7,8,11,12,17,20,22 97:10	artisan 31:12 artist 173:10 174:20 182:9 205:5 227:11 239:10 artistic 182:24 198:13 199:2,20 205:9 aside 109:16 149:23 186:19 243:8 asked 36:10 91:18 110:8 143:20 159:21 167:4,6 168:5 asking 28:11 30:23 38:21 48:5 178:8 188:12 222:19 asks 69:25 91:6 aspect 9:12 89:8 154:2 199:12 aspects 10:10 18:15,19 20:24 21:4 134:12 173:23 226:9 236:2,2 asserted 9:11 23:19 71:14 95:2,2 152:2 205:14 206:13 208:10 219:16 219:17,19 220:21 229:6 236:6 assigned 161:11 assistant 7:15 associated 22:3 222:23 223:19 association 224:15 assuming 148:10 156:16 195:1 Atlanta 3:7 attempt 176:4 attempted 175:23 attempting 42:5 186:13 attention 8:14 246:4 attorney 7:7 31:7 attribute 227:4,5 240:1 240:10,11 attributes 202:14 226:5,7 226:10,12,22,24 authority 69:2 70:4 Authorized 247:8 AV1 17:3 145:2 availabilities 173:9 available 59:11 96:4,5 204:14 230:8 Avenue 2:16 average 54:18 58:17 averages 54:23 Avid 24:5 avoid 29:15 108:17 128:11,16 191:8 208:17 avoiding 138:1 aware 108:15 111:7 165:2	B B 124:14,15 170:17 Babe 110:18,24,25 119:13 back 7:17,18 10:4 15:8 60:21 63:2 67:25 77:18 77:21 80:19,24,24 83:10 86:4 89:13 95:10 97:24 113:5 122:17 129:16 172:11 179:7,8 192:24,24,25 193:1 195:24,24 198:24 202:22 203:4 205:4 207:1 211:2 221:8 224:25 232:4 background 9:18 15:25 79:22 81:20 94:24 95:11 167:15 221:18 234:3 bad 95:19 Baer 7:17 baffle 165:6,7,9,10 bandwidth 233:14 bar 22:15 34:12 barrier 70:7 base 223:7,16 224:15,16 237:21,21,24 baseball 110:17,22 based 12:15,17,23 15:9 21:10 22:1 26:16,25 29:24 71:19 73:9 84:11 118:10 119:2 128:24 129:17 159:20 163:9 207:11,21 209:2 222:4 227:8 229:10 234:12 basically 10:8 11:16,22 13:2 37:4 54:3 109:1 115:18 116:25 119:20 126:3 136:23 184:10 244:14 basing 160:12 basis 72:14 74:5 123:24 124:1 206:2 bearing 219:19 220:5 237:9 bears 196:20 beat 113:1 Becton 124:9 began 36:1 beginning 72:18 89:4 241:13 begins 69:1 70:25 76:3 77:3 78:5,6,9,21 79:19 83:22,25,25 84:10 85:3 85:9 86:2,7,9,15 87:22 88:3,3,20 91:14,16 93:18
---	---	---	---

begun 71:13 74:17 behalf 2:3,13 3:3,11 4:3 4:11 5:3,11 6:3 7:11,21 7:25 8:24 9:2 172:17 believe 30:12 31:3,17,20 41:4,6,11 46:15 58:2 60:8 61:4 67:18 78:1 86:8 88:7 89:24 90:16 90:23,24 92:5 134:14 148:14 151:20 185:15 185:22 195:12,24 197:4 208:20 210:3 228:16 231:18 233:25 245:14 believed 235:9 believes 27:7 bells 173:5 benefit 136:19 benefits 81:4 best 37:10 52:23 125:6 173:6 174:14,19 175:17 199:24 202:24 203:3 213:2 223:4 227:10 better 14:6 53:7 81:5 140:4,10 153:13 156:24 157:3,11 187:14 227:19 233:18 beyond 22:24 40:10 168:22 173:23 Bhattacharyya 1:3 7:3,6 7:19 8:8,16,22 9:4,9 23:1,4,6,8,11 30:2,17 30:25 31:19,21 32:20 32:24 35:20 36:11 40:19,23 41:2,11,16 44:22 45:19 46:4 47:1 47:10 48:6,17,19 49:5 49:15,21,25 50:3 52:3 52:13,16 56:7 60:20 60:24 61:2,9,13,16,23 62:3,8,13 63:1,15,23 64:5,9 65:6,11 66:3,22 68:3,11,13,18 76:19 77:23 78:18 86:3,6,13 86:22 87:1 89:13,16 90:9 91:20 92:5,13,16 93:23 94:4,6,14,20 96:20 99:17 106:19 133:11 134:2,6,12,17 134:21 136:13 137:10 138:4,15,19,25 139:6 140:19 142:5,10,14 143:12,15 146:7,10 147:2 148:8,17,21 150:1,4,25 157:19 158:13 159:6 165:1,17 165:21 168:24 169:5,22 170:8 171:13 172:12	180:3,10,12 187:11 189:21,24 190:5,10 192:2,6,10,13,18 194:8 195:6,15 196:7 197:1,6 197:10,23 198:25 220:25 221:4 223:25 224:3 237:13 238:1 245:3,7,17,21 246:9 bi-prediction 37:17,18,25 38:12,15 45:25 bi-predictive 14:8 37:14 37:21,22 55:24 57:8 67:23 Bicon 121:2 big 11:3 68:12 199:3,5 bigger 11:6 binding 104:24 192:5 Bingham 7:17 Biosciences 27:25 28:2 bird 2:6,15 3:5,14 4:5 7:11 96:2,5,11,12 99:9 99:14 117:25 118:3,7 118:11 134:25 135:5,10 bit 9:23,24 10:2,4 12:6,9 12:13 13:3 28:1 36:14 57:7 67:23 77:6,21 79:22 84:6 95:17,19 97:3,12,16,19 145:13 149:18 165:5 172:21 174:16,21 175:7,12,13 175:17,19,22 183:6 184:13 189:1 192:22 193:3 196:21 199:18 200:3,5 232:24 233:17 233:22 239:18 bits 14:6 97:9 bitstream 57:11,13,15,17 57:19,22,22 58:3,8 59:2 61:15,16 62:7 68:1,2 80:4 blacked 235:18 blended 110:14 blob 173:15,17 174:6,9 block 12:8,8,12,16 14:13 15:2,3 16:16 17:21,23 19:12 20:10,16,17,18 21:24 22:8 24:22,23 25:12,14,16,17 26:2,3 26:24,25 27:1,2,12 28:12,13,14,18,19,23 28:23,24 29:19,20,23 30:23 32:21 33:1,9,13 33:18 34:20 35:2,5 38:24,24,25 39:1,20 50:9,12,13 51:5,5,8,18 51:20,24,25 53:6,8,11 53:13,18,21,25 54:11	54:17,25 55:3,6,12,14 55:17,17,18,20 56:1,6,7 56:11,20 57:3,11,14 58:5,9,13,17,22,24 59:3 59:5,14 60:7,10 61:6,7 61:20,21 62:14,15,20 62:22 63:6 64:8,22 65:4 65:4,7,17,18,19,24 66:1 66:11 67:3,9,11,13,14 67:20 72:11,12,25 73:1 82:13,19 95:22 96:1,6 96:11,14 98:6,16,19,22 99:2,4,7,8,12,16 100:4 101:4,5,7 103:25 115:23 118:7,20 134:25 137:13 152:14,16,17,22 153:12,24 154:4,6 155:13 156:11,14 157:1 162:15,16 163:17,24 164:2,5 166:13 167:12 170:23 208:2 229:8 block's 153:11 block-based 20:16 21:21 block/macrobloc 55:22 blockbuster 199:4 blocking 82:5,7,17 blocks 11:5,6,6,7,7,8,10 20:2,2 22:11 26:2 28:20 28:22 30:20 33:13 53:1 57:9,20,23 59:2 66:17 67:24 81:25 82:3,18 93:3,3 96:14 129:13 152:15,19,21 153:18 167:13,14 169:18,18 171:10 blow 167:24 blown 19:14 21:17 97:23 blown-up 97:6 blue 11:15,21 12:4 19:6 120:5,13 211:22 212:25 213:10 blur 157:17 Board 95:4,5 102:8 Bogdanowicz 217:2,3,4,9 217:18,23 221:7 236:9 236:10,13,18 238:15 book 110:22 bore 110:4 125:4 born 111:1 bottles/types 14:14 bottom 12:12 14:12 16:5 16:13 22:20 44:3 46:20 54:20 83:1 89:1,1 96:4 101:17 105:11 115:21 115:25 131:25 135:3 167:24 176:24 178:18 204:11	boundary 72:18,21 73:5 88:22 89:4 bounds 23:25 box 87:17,20 88:9 89:3 89:14,17 92:7 103:20 103:23 105:23 118:15 128:12 150:14,15 boxes 217:4,19 boy 116:6 BP 101:5 bracket 19:10 bracketed 21:14 brand-new 173:4 break 49:24,25 133:12,13 197:4,5,6 208:24 breeze 221:17 brief 9:11 20:5 32:3,3 35:22 77:5 88:2 95:11 100:7 123:24 128:5 147:17 149:12 161:12 161:15 166:11,16 167:3 177:23 181:1 186:9 191:18 192:3 193:5 196:22,22 197:16 209:8 209:10 210:22 211:2,3 212:9 215:5 218:1,7 219:6 229:21 235:12 245:5,6 briefed 9:14 briefing 8:19 20:4 35:13 87:25 90:17 102:11 163:20 185:16 209:2 222:10 231:18 briefly 49:8 92:14 130:5 188:24 195:8 196:11 198:15 206:5 232:21 233:2 bright 200:5,11 226:18 brighter 209:20 219:4 brightness 136:2 209:12 210:20 211:6,8,9,11,14 226:8,14,15,17 227:16 244:5 bring 8:14 27:24 60:17 101:19 191:11,15 196:2 205:4 brings 83:10 102:3 broad 162:6 181:15 broadcast 204:22 broaden 40:9 broader 30:5,8 39:12 181:4 broadly 127:3 170:14 186:5 broken 11:4 brought 142:6 196:3 buffer 69:13 80:20,25
---	--	---	---

95:25 96:19 97:15 98:20,21 99:11,23 100:11,22 113:16 147:23 buffering 117:13 131:8 138:3 Building 5:6 built 244:1 bullet 89:1,1 123:8 bunch 66:14 110:11 120:2 128:5 174:24 226:7 buried 41:22 Burns 3:12 7:12 busy 119:25 120:1 C C 4:12 7:1 cable 204:22 205:2 cache 69:13 calculate 135:12,20 136:10 137:6,8,14 calculating 137:5,7,13 153:22 calculation 154:3 calculations 101:11,11,14 101:21 154:7 158:3,7 calibrate 209:14 218:13 calibrated 243:4 calibration 207:22,24 208:1,2,6 225:14 229:4 229:8,8 242:25 243:1,5 244:18,19 California 4:7 5:7 8:6 call 49:12 52:10 65:21,21 123:21 135:2,25 136:25 152:25 171:22 212:10 224:11 called 10:25 11:7,8,23 12:2,18,21 13:10 14:7 25:21 115:2 116:9 131:15 151:12 154:17 165:8 166:19 184:25 188:4 214:7 217:8,20 calls 39:19 53:20 81:11 201:13 203:25 204:2 224:10 camera 9:23 32:10 76:24 116:4 Camino 5:6 camp 192:20 canon 59:9 capabilities 174:7 198:22 199:23,25 244:8 capability 182:18 227:10 capture 42:5 car 11:21,22,22 13:1,4,5	13:7 45:9,13 cardinal 21:12 245:13 care 115:16 138:24 158:10 careful 142:18 148:25 cares 158:11 Carmen 247:20 Carolina 3:16 carried 128:24 carry 29:25 58:11 case 9:12 23:19 24:5,10 24:18,25 27:25 28:3,8 34:16 45:14 47:21 90:20,24 105:10 109:4 111:8 114:5 117:18 118:22 119:19,20 121:2 124:3,9,9 125:7 127:2,6 128:14 141:15 149:21 152:4 153:12 165:11 172:6,10 178:4 185:25 186:8,9 191:21 212:14 219:24 cases 27:23 35:13 49:13 74:7 90:16,18,19 186:1 186:3 cat 151:11,12,18,23 cause 78:11 82:21 caused 82:12 247:18 causing 73:22 cede 23:3 cellphone 233:13 centerpiece 69:9 certain 1:7 7:4 18:15,19 18:25 20:24 21:4 78:8 78:10 90:2 128:7 162:4 221:24 236:1 247:1 certainly 42:12 86:10 89:19 90:15 147:6 190:7 218:12 229:13 239:3 CERTIFICATE 247:1 certify 247:5,9,17 cetera 204:23 205:3 209:15,21 challenge 41:15 challenged 95:2 chance 167:15 change 10:19 34:3 90:7 104:24,25 144:12,15 160:10,11 175:16 176:9 179:22 194:23 198:12 209:20 changed 144:17 changes 11:22 48:15 95:14 100:15 144:11 209:8 212:9 227:16 247:13	changing 95:16 105:22 145:7 150:18 163:3,14 176:15 178:4,6 characteristics 183:13,15 characterization 133:9 195:21 characterize 236:1 characterized 124:19 125:17 charge 7:13 Charlotte 3:16 chart 172:14 245:23 Chicago 110:18 chip 128:17 chips 128:15 choice 73:6 choices 45:20 choose 14:1 155:10 163:8 171:11 202:23 chop 233:25 chops 171:16 chose 16:9 43:19 51:7 104:21 118:2 177:1,20 224:7 chosen 105:18 112:8 119:22 206:1 223:20 Christopher 247:15 chronological 71:7 Chu 6:4 8:3,3 180:6,6,11 180:13 187:13 189:22 190:4,7,12 192:4,7,11 192:15 194:8 195:8,17 196:10 197:2,9,11,11 197:24 199:1 221:2,6 221:18 222:2 224:3,22 227:21 232:11 238:3 245:19 246:7 chunks 10:22 CIPRA 76:10 circle 221:8 Circuit 15:10 18:2,2,13 18:20 19:6 21:11 22:18 24:5,10 32:17 34:5,9 35:12,14 52:19 69:14 69:17 70:4 71:1 74:7 85:4 104:21 106:3 121:3 123:22 124:2 127:7 160:6 161:8 165:5,8 176:19 186:2 Circuit's 90:20,24 circuitry 208:2 circumstances 139:10 Cisco 124:2 citation 28:2 94:16 222:7 222:7 citations 231:3,4 cite 28:9 206:18 231:23	239:24 cited 59:25 90:16 186:1 231:18,19 232:22 235:17 cites 239:6,21 242:22 claim 9:16 15:15 18:16 19:2 24:7,9,12,19 25:1 25:15 26:21 27:8,19 28:7 36:17,17 37:1,3,3 37:7,9,9,16 38:1,3,5,11 39:4,24 40:1,2,5,7,9,16 42:3,6,10 43:2,9,10,16 43:18,18,20 44:2,4,5,6 44:7 47:13,13,14,15,16 47:17 48:11 50:22,22 51:12,13,14 52:20,21 52:24,25,25 53:15,20 54:9,13,13,15,15,15,16 57:5,11 58:16,19,25 59:1,2,6,12,18,21 60:1 60:14 64:18,19,24 65:1 65:18,21,21 66:1,4,6,9 66:23 67:1,20,21 68:1 69:2,9,12 70:1,8,16,22 71:5,12,14,14,15,15,17 71:17,23 72:5,15,19 73:5,21 74:5,12,15,16 74:20,23 75:21 76:4,5 76:14,15 77:12,13,16 78:8,12,13,22 79:4,13 79:15,17 83:11,12,13 83:13 84:6,12 85:6,9,17 85:23 86:10,21 88:17 90:18,18,18,22,22 91:1 91:4,4,13,22,22 94:23 94:25 95:6 103:16,18 103:20,21,23 104:16,18 104:23,24 105:8,9,18 106:5,6,8,16 107:1 108:2 109:10,21 111:16 112:1,2,10,20 113:13 115:1 117:1 119:17,21 120:1,21 121:10 122:21 123:8,23,25 124:1,16 125:7,19 127:20 128:8 129:2,2,17,19 131:24 132:1 133:3 138:12 145:5,7,11,11 146:3,6 146:18,20,23,24 147:9 150:18 151:15 155:20 155:21 158:25 161:1,4 161:4,9,18,19,21,24,25 162:1,4,5,6,9 165:8 166:20,21,22 167:10,24 172:6,7,8,8,9,10,11,13 172:14 175:25 176:17 176:23 177:2,6,11,20
---	---	--	---

178:20 179:4,23,25 183:18,18,24,25 189:1 189:2,2,6,6,9,12,14 191:11,15 193:1,17,20 194:1,17 196:2 206:13 206:16 208:10,10,11 209:23 210:6,7,9,9,12 210:25 211:17,18,22 212:4,5,13,14 213:25 216:14,18 218:3 219:16 219:17,19,23 220:6,21 224:21 225:8,8,16,19 225:20,23,25,25 229:3 229:4,5,5 232:4,15,16 232:17 236:6,20 237:14 245:12,23 claim's 69:20 70:15 71:2 claimed 36:23 38:3,12 39:17 40:12 51:23 53:4 70:1 72:3 75:16 89:4 102:16 132:17 142:23 142:24 147:10 183:17 183:23 210:23 222:13 244:17,18 claiming 185:19 claims 20:16 23:23 24:1 26:13,19,24 27:6,13 28:10 29:16,24 31:9,16 35:17 36:6 38:9 39:2 40:21 43:4,5,8,22,22,25 50:13,14,17,22,23 51:1 51:3,7,11,11,15,17 52:2 52:20,23 54:12,24 58:7 59:4,23,25 60:5 61:19 64:17 65:7 69:5 71:15 71:17 73:8,15 75:20 84:19 85:5,8 90:11,12 90:23 91:7,11 93:17 95:2,2,4 103:18 104:2,5 104:7,11,22 105:22,24 106:2 107:12 111:17 113:2,5 117:6 119:9 122:16 124:4 128:23 129:25 131:11 132:3,4 144:19 151:9 152:1,2 153:7 155:19,19,22 156:3 157:15 159:16,19 162:6 164:13 168:19 172:7 177:7 191:11,12 193:18,18 194:15,15 195:3 197:18 205:14 219:10,10,11,12,13,15 219:19,20 220:1,2,5,20 221:9 232:4,5,10,13,14 235:23 236:4,13,17 237:10 clarify 151:10 166:23	clarifying 163:2 166:24 clarity 185:24 188:13 191:11,15 196:25 class 201:25 242:8,12,15 242:17,18 classes 230:4 241:2,19,22 242:4 clause 37:4 40:7 86:23 130:25 179:7 clauses 58:23 clean 82:5 87:14 cleaned 80:5 Cleaned-up 81:4 clear 15:13,21 18:21 19:1 20:22 22:16 34:4 41:5 74:2,11 84:21 85:1 93:10 101:19 104:22 107:20 120:21,25 123:20 126:24 133:2 144:21 147:8,15 152:9 153:10 154:5 155:14,18 157:7,15,16 159:1 166:18 169:16 181:4 185:17 190:9 195:20 198:4 204:24 210:10 215:3,8 221:8,14,20 226:2 229:20 244:20 clearer 163:13 clearly 18:4 107:19 110:5 132:8,10 137:22 138:20 139:3 156:1 166:6 214:15,19 234:18 client 7:15 clip 174:13 clipping 139:15 173:25 clockwise 155:10 close 46:17 133:10 161:9 238:3 closer 9:5 closest 199:16 226:20 244:3 cloth 176:15 179:2 CMX-11 214:2 co-counsel 170:3 coarse 81:22 code 128:13 149:8 coded 16:6 46:21 50:9,12 50:13 51:8,20,25 53:18 53:21 54:11,17,25 55:17,18 56:7,19 57:25 58:1,5,5,17,22,24 59:3 60:13 61:6,20,21 62:15 63:13 64:22 65:7,10,10 65:17,18,22 66:1,21 67:3,14,20 68:2 coded-encoded 62:6 coding 9:20 10:11 11:13	13:15 14:8 15:20,22,23 16:24 17:1,17 37:14,21 37:22 38:17 51:1 80:1,3 80:17,24 81:10 96:7 126:13 coefficient 141:12 coefficients 81:23 141:14 149:13 152:20 153:10 164:1 167:14 177:10,14 194:18 cold 194:12 collapse 212:16 collapsing 136:24 colleague 31:24 68:7 76:21 colleagues 8:1 collectively 110:14 color 82:25 175:16,16,18 175:21 176:7,8,11,24 177:1,9,12,13 178:21 178:22 179:6,12,15 180:18,19 181:7,8,9,10 181:11,17,25 182:2,14 182:14,18,19,22,23 183:2,3,13,21,23 184:4 184:5,5,6,8,11,15,22 185:7,8,9 186:24 187:1 187:3,8,9,17,21,22 188:1,4,8,11,17,17,19 188:22,25 189:3,7,7,10 189:13,14 190:1,2 191:22 198:1,2,5,5,8,8 198:10 199:21 201:22 203:6,10,22 215:23,24 216:1,2,11,19,19,20,20 216:23,24 217:21 218:16 220:10 222:4 226:7,15 230:2,7 231:20 239:9,15 240:20 240:24 241:15,16,17 242:7,10,11 colorist 201:20,21 205:5 colors 120:1 174:13 182:15 198:12 199:11 199:11 209:21 227:17 227:17 colour_map_model_ID 185:1 colour_map_primaries 187:8 colour_map_vdeo_for... 187:7 column 39:11 44:15 89:24 92:17 94:3,17 100:24 101:13 113:11 113:23 115:14 117:4,4 121:24,25 124:21	125:22 126:13,16 142:18 143:20 153:7 154:20,23 155:14,14 182:17 183:1,7 184:24 185:14,14,14 187:5 188:15 198:3,9 200:9 200:15,23 201:16 202:1 202:15,25 203:5,9,20 204:7,13,19 205:23 206:9 207:2,9,15,25 212:22 227:2 229:22 239:25 240:22,23 242:5 columns 101:7 111:19 116:24 120:17,20 121:5 129:20 138:24 combination 13:21 14:10 37:3,5 38:22 40:6 41:12 45:14 56:11 57:3 60:9 60:11 62:20 63:12,24 66:10 112:17 121:23 131:9 132:6 171:9 172:5 237:25 combinations 39:12 combine 14:3,5,8 38:6 39:17 53:16 58:20 64:20 94:10 108:11 114:21 140:4 141:24 combined 37:15,19,24 38:16,17 39:23 40:17 44:20 46:2 47:24 55:14 58:12,15 60:14 67:13 110:3 121:23 136:12 137:4 139:9 145:18,23 149:15 combiner 60:21 65:3,4,8 combines 45:6 55:11 59:19 64:4 combining 38:23 51:21 52:5,7,8 53:9,14,16,20 53:22 54:5,10,22 55:1,4 55:7,9,10 58:4,8,14,20 59:12,23 60:3 63:11,14 64:3,11,14,20 65:17 67:7,9,12 128:1 131:15 140:11,17 come 54:5 55:8 66:19 87:7 132:24 152:12 157:2,11 170:3 171:20 171:21 176:21 194:24 209:1 236:5 comes 17:19 19:5 36:22 58:3 64:3 88:3,20 90:5 110:16 112:19 122:16 179:2 207:14 223:16 224:4,15,16 245:23 comfortable 118:1 121:15 134:19
--	---	---	--

coming 57:15 58:14 64:11 65:25 89:15 97:13,22 98:2 153:22 194:2 228:5 238:19 commenced 1:24 comment 35:22 65:15 comments 26:14 32:1 192:16 Commission 1:1,16 247:6 247:11,18 commit 143:5 common 10:24 23:15 70:18 91:25 160:7 164:16 commonality 36:13 commonly 176:20 220:14 commonly-used 160:6 168:16 commonsense 78:24 79:16 91:18 communally 110:13 compare 212:3 compared 144:13 compares 213:9,11 comparing 213:17 comparison 120:24 206:2 213:17,19 compels 91:6 compensating 141:3 compensation 52:9 53:11 55:5,13 98:14 99:6 100:9,11,20 101:4 102:24 103:24 104:3 106:15 107:15 108:6 111:20 112:5 113:4 114:17 115:2,6,10,16 115:19 116:9,10 117:2 117:9 118:13 119:5,7 120:18 121:1,7,19 122:3,8,14 125:18,19 125:23 126:1,4,8,17 127:15,22,24 129:12,14 130:7,13,14,19,24 131:6,16,19,20 132:10 133:5 135:16,18,23 136:7 139:4 142:1 143:3 145:4 147:14,23 148:3,10,19 149:5,9 150:9 Complainant 2:3,13 3:3 3:11 4:3 9:2 23:17 24:14 41:19 79:20,21 93:25 94:15 156:7 172:18 221:5 complainant's 30:4 48:8 56:3 61:4 74:13,18 75:21 76:14 92:6 95:21	100:14 147:16 169:23 175:23 181:14,21 186:25 191:9,10,17 209:17 Complainants 7:11 25:10 26:22 27:23 29:1 30:22 31:21 41:15 56:21 58:23 62:10 66:23 71:16 73:25 152:4 180:20,22 185:21 186:6 186:11,13 188:7 189:18 190:15,24 191:6,18,22 208:15 209:7 210:21 212:7 218:1,2 219:8,13 238:7,25 239:24 242:24 246:3 Complainants' 194:9 209:2,9 210:25 211:2 212:15 214:2 215:4 218:7 219:6 239:6 complete 246:1 247:5,14 247:19 completed 69:4 70:13,19 76:9 completely 23:24 31:2 61:21 155:2 158:9 193:12 219:22 235:15 completing 76:7 complex 245:22 complicate 152:11 complications 139:14 component 39:21,23 52:13,15 78:23 124:14 124:14,15 128:7,10,11 137:21 207:24 225:14 229:4,8 242:25 243:1,6 244:18,20,20 componenting 103:24 components 1:9 7:6 80:11 124:11,12 131:4 131:5 206:6 217:7 247:2 compose 108:11 composed 136:9 composite 139:7 composition 112:16 121:24 122:1 127:16 130:24 131:12 compress 66:14 compressed 10:2 56:10 57:2,12,14,14,19,20,24 60:9,13 62:1,19 63:3,9 63:15,17,21 64:6 65:23 65:25 compresses 9:24 57:21 compressing 10:11 80:4 compression 10:16 26:25	66:12 comprise 149:8 177:10 177:13 comprises 83:14 85:10 91:23 215:22 comprising 206:16 computation 103:5 135:22 138:1,3 computations 73:2 88:14 101:11,21 103:5 compute 99:14 118:10 computer 180:8 concede 170:5 211:9 concept 26:13 153:3 157:15 182:13 217:18 219:17 220:14 concepts 14:22,24 158:12 198:6 concern 25:14 84:24 128:17 140:20 189:16 190:14 194:12 196:15 196:24 concerned 140:21 143:24 194:9 235:21 concerns 95:13 144:16 concluded 28:9 246:12 conclusion 28:4 88:2 132:24,25 229:14 concrete 186:20 194:16 199:2 concurrently 110:13 118:19 conditions 95:16 204:8 241:19 conference 109:4 conferring 192:21 confess 152:8 158:16 confident 144:15 configured 208:12 confirm 28:7 129:24 150:22 209:1 confirmation 192:9 confirms 69:2 76:5 127:14 211:17 conflating 76:11 84:12,12 confused 49:6 107:25 123:14 158:16 confusing 50:14 106:10 160:23 confusion 219:24 231:14 conjointly 125:24 145:18 connected 67:9,11 124:14 connection 95:17,19 connects 26:12 connote 171:5 connotes 169:20 consider 19:8 153:18	191:5 consideration 158:9 162:17 163:1,6 considered 14:18 38:14 217:1 considering 93:16 consistent 17:11 28:4 39:3 41:9 48:4 55:2 60:7 70:3 126:18 133:9 164:7,12 199:22 consistently 125:12 185:12 220:17 constitute 209:17 construct 149:17 constructed 78:11 149:19 149:24 construction 15:7 17:12 17:19,24 19:5 22:12 23:18 24:6 25:2,19 27:10 29:5,17 35:9,15 35:16,18 37:7,9 38:19 39:25 40:4,13 42:4,5 43:1,21 44:7,10 46:8,13 47:3,6,8 48:5,8 51:9,12 53:22 56:3,4,10 57:10 59:5,11,14 60:16 62:18 62:19 63:25 64:12 65:1 68:24 71:19 72:15,19 73:1 74:10,22 75:25 77:2 78:3,7 84:5 88:4 88:12,21 89:3,10 90:22 91:6,15 92:21 93:22 95:4 101:20 102:1,5,17 102:18 103:17 104:4,9 105:2,8,14 106:1,6,12 108:2 109:11 111:15 120:7,25 123:16 125:3 128:3 132:12 134:7 138:7 140:21,23 142:8 143:25 144:3,8 146:22 149:1,12 151:16,17 153:14 156:16 158:18 158:25 159:3,7,21,23 160:16,18,21,22,23 161:13,23 162:10,13 163:1,19,22 164:15 166:22 170:1 181:15,15 185:6 186:15,25 190:16 191:11 193:2 196:1,2 210:10,17,18 211:1 212:15 225:7 226:1 constructions 24:15,20 24:24 25:8 106:4 109:7 construe 15:1 23:23 49:1 49:2 102:9,21 144:22 146:6 151:9 160:7 168:22 171:19
---	---	--	--

construed 22:24 41:7 95:10 construing 40:24 90:13 145:10,11 168:8 178:20 consumer 9:13 10:3 182:6 202:11 204:13 consumer's 202:11,23 consumers 198:11 200:17 contain 55:22 111:19 226:4 contained 46:19 contains 57:23 108:20 contend 56:4 74:25 186:13 209:3 content 28:8 57:19 81:8 81:16,17 172:22,23 181:25 198:15,16 200:22,23 201:20 203:21 204:1,3,6,7,10 204:12,15,16,16,17,20 204:25,25 205:6,6,10 205:10,13,15,17,19 218:17 219:20,21,22,23 220:3,4,13,15,18,18 221:21,22 222:4,8 230:17 231:11,12,15,15 232:13 233:3 239:7,8 239:10,16,17 240:15,19 241:4,16 242:9 244:23 contentions 170:13 context 8:15 15:23 19:8 19:10 21:16,18 45:20 51:16 71:7 74:23 85:22 85:25 105:5 147:6 152:16,22 178:14 181:20,21 197:15 200:20 210:7 229:6 236:24 239:21 continually 102:12 continue 47:7 196:4 continued 2:25 3:1,25 4:1 4:25 5:1,25 6:1 continuous 10:17 Contractor 247:8 Contractor's 247:8 contrary 196:21 contrast 21:19 97:7 199:12 226:8 contrasted 38:11 73:11 control 176:3 213:14 controlling 118:22 controls 85:17,19 conventional 22:9 Conversely 158:8 conversion 107:16 108:6 111:20 112:6,13 114:10 115:7 117:10 119:8	121:1,18 122:4,8,15 126:10 127:22,23 132:1 139:5 150:9 182:20 216:1,12 convert 215:23 216:10 converted 9:23 216:2,12 convey 177:25 convince 235:7 convolve 141:16 copy 68:16 151:11,12,18 151:23 corollary 233:24 correct 32:19 33:19 46:9 52:1,2 94:12 106:4 124:18 134:15 148:20 165:3 182:22 195:11 208:21 209:15 212:7,11 218:18 219:7,18 222:2 224:7 227:18 234:23 235:11 238:11 239:9 247:5,14,19 corrected 203:22 230:7 correcting 201:22 230:2 240:24 241:5,15,16,17 correction 182:14 198:2 198:5,8,11 199:21 201:21 203:7,10 218:16 220:10 224:10,11 226:23,25 227:4,13 231:20 237:17,17,22,25 239:1,2,3,15 240:2,3,11 240:20 242:7,10,11 corrections 224:11 226:12,13 227:14 corrective 222:23 223:6 224:9 228:11,15 229:9 233:23 correctly 89:25 94:18 correlate 241:25 correlation 26:21 156:14 157:21 170:22,24 correspond 19:21 20:7 21:21 26:18 61:14 correspondence 236:19 corresponding 89:23 94:2 143:23 226:13,22 227:22 228:14 corresponds 181:2 223:5 226:23 corroborate 73:24 74:9 76:12 corroborative 72:14 corruption 82:9 83:1 cosine 66:13 counsel 7:16 23:14 30:4 32:2 33:19 41:21 52:22 61:4 88:5 92:6 106:18	108:5 109:22 110:8 111:11 113:10,22 114:10 119:2 121:10 128:4 129:3 143:20,21 150:7 158:17 162:2,19 169:2,23 171:16 172:3 181:21 191:9,10 195:9 196:12,19 208:24 226:1 238:7,25 239:7,24 242:23 counsel's 241:3 counting 73:9 counts 43:20 couple 30:3 63:19 102:11 168:25 186:8 coupled 55:4,6 course 24:3 46:2 125:5 159:9 court 24:18 27:24 28:3,5 28:9 34:16 35:17 48:5 70:4,8,11 108:15 111:7 118:25 124:13 245:15 247:9,11,21 court's 24:12 courtroom 7:18,22 114:12 courts 18:23,24 19:1 21:5 21:6 cover 69:8 covered 113:22 143:4,10 221:18 covers 180:14 craft 201:4 crashed 180:9 create 74:3,11 80:11 99:7 182:10 202:5 205:6,8 219:20 220:3 221:25 228:17 231:6,6 232:2 241:19 created 14:19 69:4,19 76:7 202:9,14 204:9 223:2 224:9 227:3 231:5 240:10 creates 88:22 144:15 205:20 creating 200:1 203:4,18 221:24 232:3 creation 203:25 204:1,6,7 204:16,25 205:6,19 218:17 219:21 220:13 220:15,18 221:21,22 222:4,8 230:18 231:1,5 231:11,15 232:9,13 239:8,9,10,16 240:16 241:16 244:24 creator 182:3 199:24 202:19,20 240:19	244:25 creator's 198:22 creators 201:1 credence 36:3 Crest 5:14 7:21 151:3 critical 69:16 crossed 172:1 Cubs 110:18 current 16:7 20:17 25:14 25:16,17 26:1 27:1 33:7 38:24,24,25 39:1 56:10 57:2 59:14 60:10 62:19 64:8 95:22 96:6,8,11,13 96:18 98:6,11,15,18,22 99:2,4,8,12,16 100:4 101:16,22 103:6 115:12 116:1,3,6,14 117:8,24 118:7 126:9 134:25 135:4 152:3,24 160:2,3 167:12 168:2 200:9 customary 18:6,9,10,22 cut 140:14 D D 7:1 D.C 1:2,18 199:15 dark 173:19 200:12 data 10:4,7,11,15 12:1,9 55:21 57:21,25 58:11 66:13,16,17 67:4 97:9 101:3 173:7 174:17,21 190:17,20 191:1 206:1 206:19,22,24 207:3,4 207:10,11 208:3,6,13 208:14 209:3,5,5,8,8,11 209:13,14,18 210:6,7 210:11,13,15,18,22,24 211:5,17 212:1,2,7,9,9 212:13,17,20 213:2,6,7 213:23 214:16 215:14 217:6,14,15,21 218:4,8 218:9,23,24 222:13,13 222:16,16 223:7,12,22 223:23 224:4,11,14,21 224:24 225:9,12,13,15 225:17,22 226:23,25,25 228:4,5,9,13,15,25,25 229:11 233:7,8,20,23 234:19,24 235:9 236:1 236:3,8,11,13,24 237:3 237:5,7,8,15,16,16,17 237:17,20,23 238:22 239:1,2,3,4 240:3 243:3 243:4,6,17 date 237:22 247:3,7 day 103:14 133:16 173:3 197:13 246:5
---	--	---	---

daylight 171:17 DC 2:8 4:16 5:16 6:7 247:3 de-artifact 83:14,15,22 83:24 84:9,15 85:2,11 86:7,9,12,18 87:21 88:1 90:5 91:13 92:8,24 93:1 93:6 dead 110:25 113:1 dealing 182:13 deals 152:13 dealt 18:13 34:10 123:22 deartifact 85:11 deartifacting 79:25 80:16 80:18,22 88:10,23 89:8 89:14,18,20 90:1,6 91:16 debate 36:1 139:10 140:22,24 debater's 123:21 deblocking 52:12 63:20 81:21,22 82:5,10,13 December 197:19 decide 236:23 decided 8:16 decides 205:22 207:19 deciding 119:1 decision 205:25 207:11 207:14,16,18 decisive 104:24 deck 100:14 180:14 decode 10:4 57:7 67:2,22 99:8 100:4 109:1 175:4 175:14 179:9,12,15 189:6 190:19 decoded 17:4,5,7 20:17 26:1 27:1 61:20 67:17 81:2,2 82:19 95:22,25 96:2,19 97:15,21,24 98:19,20,21 99:11,23 100:10,22 147:22 152:17,22 189:11,13,14 189:19 190:1,8,20 191:24 193:17 decoder 10:3 12:14,14 13:5 51:13,18,23 52:5,6 52:14,15 53:1,4,5,10 54:1,6 55:1,10,21,21,25 57:5,7,17,22,25 58:16 62:5 63:4 64:11 65:5,20 65:22,25 67:2,5,19,22 72:10 73:3 79:6,24 80:21 83:14 84:14 85:10,19 86:11,17 90:8 113:16 128:15 175:6 decoder's 79:25 decoders 64:14 97:18	decodes 55:21 57:6 decoding 9:13,19 10:7 53:1 54:1 61:25 63:8 66:20 73:2 91:22 96:7 99:4 126:12 152:14,14 152:16 172:20 179:11 179:20 189:8 190:17,25 191:5,20 193:12,18,19 decompress 10:3 decompressed 63:19 decompression 20:17 21:22 deducible 182:23 deed 107:9 define 31:5 defined 169:11 241:9 defines 88:11 defining 18:8 20:5 definition 18:3 19:2 20:25 21:3 30:19 32:14 34:4 42:1 56:6 57:1 62:24 114:2,4 116:6 152:9 179:22 182:12 definitions 17:8 30:5,6,9 59:9 deleted 113:1 129:1 130:18 delivered 204:2,16 213:25 delivery 204:17,20 205:2 205:10 230:17 demonstrates 89:22 demonstratives 9:3 245:25 denotation 178:13 dense 21:20 22:1,2 depart 84:18 department 32:4 departs 84:5 depend 74:10 117:7 126:8 153:11 156:9,10 156:12 163:7 170:25 depended 70:9 dependence 161:15,16,21 167:5,18 168:6 dependencies 162:8 dependency 70:18 71:18 74:6 162:4,5 172:5,6 dependency-based 69:22 dependent 154:25 155:17 155:19 157:13,13 161:18,23 162:5,9 172:7,9,11 177:7,11 194:17 195:3 depending 69:4 121:15 141:16 155:22 depends 69:23 76:7	115:10,11 126:1 152:2 152:23 155:20,20,23,23 155:24 156:5,5,18 157:5 159:13 160:1,4 160:10 161:3,7,19,20 163:3,11,24 164:11 168:2,3,15 170:9,12,21 depicted 202:14 dequantization 61:25 describe 104:23 117:20 117:23 127:3 135:15 142:21 157:10 166:1,2 176:16 177:2,3,17,19 178:3 180:21,23 181:3 181:8 183:13,21 185:7 185:12 187:9,14 188:17 188:19 193:23 196:17 224:9 described 27:6 71:2 89:17 92:8 114:24 115:18 119:11 125:17 143:7,8 177:17 215:25 224:10 describes 16:10,14 70:2 71:4 72:8 77:9 81:20 92:18 94:3 102:14 127:7 182:22 215:20 224:13 describing 127:3 188:16 194:19 208:16 209:19 224:3,4 description 127:8 143:22 143:23 231:10 236:23 descriptions 18:24 166:17,20 176:10,13,16 descriptor 69:18 despite 42:20 51:10 193:13,24 destination 184:18,19,21 details 18:25 52:8 83:1 detection 118:23,23,24 118:25 determination 20:6,12 26:17 34:25 163:7 170:20 determinations 19:17,25 determine 54:14 91:7,9 101:4 149:19 152:20,21 153:17,21 154:1 162:21 162:22 163:10 determined 154:6 157:20 160:10 161:3,5,6 163:4 163:9,17 164:4,10,11 170:9,10 171:4 203:13 231:22 determines 154:7 determining 155:16	162:17 163:1 171:6 197:20 deviate 15:12 deviates 144:5 device 9:14 10:3 184:10 184:14 201:13,18 202:6 202:10,12,14 203:8,12 203:15,16,19,23,24 204:1,9 205:12,21,25 206:3,4,11,19,20,21 207:17 208:4 211:21,22 212:4,12,16,24,25 213:5,16 214:20 215:22 216:10 221:25 222:24 223:2,3,4,19 226:3,4,6 226:19,20 227:3 228:6 228:8,8,9,10,13,14 230:7 231:7,22 232:3 233:23 234:20 239:11 240:9,15,16,17 241:20 241:22,24 242:10,11,15 243:11,20,22 244:1,2 244:12,20 devices 1:8 7:5 182:7,17 220:10 233:21 242:17 247:1 diagonal 155:6 158:11 difference 30:18 43:24 61:5 62:4 98:23 99:14 101:15,22 103:6 105:22 147:17 167:16 177:16 178:13 192:2 194:3 196:12 215:14 220:18 differences 101:25 105:15 172:13 174:9 different 10:23 13:22,22 13:25 18:5,8 37:20 43:4 43:5,6,6,6 45:18,20 46:5 48:22 49:7 50:7,16 50:16,24 51:1,1,2,7,10 51:11 59:3,8 77:15 81:11,11,24,24 82:16 83:7 87:2 88:13,14 96:9 96:21,21,22,23,24,24 97:2,2,18 104:17,19 110:15 111:2,17,23 115:14 116:11 121:6 124:11 128:14 140:10 140:17 141:13 154:23 155:2,15 156:1 157:8 158:9,12 161:2,10,14 162:3 163:12 166:18 168:9 172:21 173:5 174:24 175:18 177:8 181:3 182:12 188:1 191:9 193:12 196:14 198:19 199:18,23 200:8
---	--	--	--

201:3,3,14 204:4,25 205:1 213:24 216:20 217:7,16 219:22 220:10 225:3 226:4,9 229:23 229:25 230:9 233:7 235:23 243:22 differentiate 122:24 differentiation 43:20 44:7 47:13,17 differently 177:5 185:22 193:4 202:20 218:21 differing 51:3 difficulty 108:14 digital 9:19 139:14,20 140:12 dim 200:11 dimension 28:21 dimensions 153:12,14 166:13 169:18 dimmer 200:3 209:20 219:5 dimming 219:2 direct 118:24 126:24 154:2 157:23 170:15 directed 20:16 21:20 25:9 26:24 53:1 75:21 106:8 109:6 119:4 132:18 144:20 145:25,25 205:14 219:23 230:16 230:17 directed-to 21:7 direction 135:13 directional 102:16 103:1 directly 26:13,21 27:8 31:9 137:5,7 141:24 director 199:6,19 disagree 30:8 62:18 64:6 74:15 78:19 92:9,11 109:7 113:10 152:7 195:1 disagreeing 150:20 disagreement 123:2 150:14 disallow 162:8 disallows 172:10 disavowal 15:15 84:17,20 84:20 176:2 disclaim 34:21 disclaimer 15:9,12,15 19:4,9 21:8,13 22:16 27:14 34:14 35:2 46:14 56:8 74:2,3,10,10,12 85:1 127:10 160:13 176:2 178:25 179:25 185:20 215:10 225:5 238:17 disclaimers 128:5	disclosed 19:21 20:6 26:17 37:14,22 72:17 153:6,20 154:17 discloses 19:17 29:3 44:16 89:25 226:23 disclosure 37:24 73:12 89:23 94:2 disclosures 29:2 discrete 66:13 discuss 10:1 196:12 discussed 13:1 20:14 33:3 107:25 195:16 198:15 200:25 202:16 205:5 208:19 219:21 222:24 235:24 236:7,14 242:14 discusses 218:15 discussion 23:12 27:6 146:11 221:23 disembodied 26:14 30:14 dispel 229:19 displace 28:25 display 97:5 173:7 182:1 182:1,4,4,15 183:15,16 188:5,6 198:18,22 199:25 200:6,19 201:5 201:13,14,23,25 202:3 202:10,13,13,13,17,17 202:18,21,24 203:2,3,5 203:11 204:3,10,12,13 204:17,25 205:8,8,11 205:13,15,17,21 206:2 206:11,14,15 207:4 208:7 210:19 211:18,19 211:20,24 212:3 213:9 213:11,12,13,14,18,19 213:20 214:8,9,10,15 214:18,22 215:1,22,23 216:10 218:5,10,25 219:22,23 220:3,10,18 221:22 222:2,5,6,14,17 223:3,4,5,17,19,20 224:17 225:10 226:8 227:4,4,6,9,10,19,19 228:11,25 230:2,4,18 230:24 231:2,9,12,15 231:21,25 232:9 233:8 234:5,6,7,13,17 239:12 239:13,15,17 240:1,10 240:11,13,18,19,21,25 241:1,4,12,14,18 242:3 242:8,12,16,17 243:9 243:14,14,15,19,23,25 244:1,4,6,8 displayed 210:14,16,23 211:4,12,13 216:13 225:18 237:17 240:12 242:9	displaying 237:15,24 displays 198:2,7 199:22 200:4,8,11,12,16 201:3 201:7,18 202:1,4,7 241:18,22,25 242:4,8 242:12,13,18 243:12 dispute 14:21 24:11,16 25:7,11 35:4,6,8,11,19 36:16,22 41:2,23,24 42:1,9,10,14 47:3,6 48:7,12,21 50:6 68:21 68:22 74:20 88:20 91:5 102:23 107:1,12 108:2 109:3,15 110:5 122:11 123:4 156:9 158:19,24 160:1 164:17 175:20 180:18,24 181:6,7,16 181:17,19 188:21 191:7 191:19,24 192:7 193:1 195:10 197:14,16 208:22,24 210:1,2,5 220:22 222:12,12,15,22 222:22 223:12,13 224:1 239:8 disputed 9:16 14:23 35:10 83:18 91:13 94:22 95:6 103:21 192:23 208:13 disputes 25:5 62:23 180:17 188:13 191:8 196:5 disputing 48:20 dissuade 27:24 distinct 50:11 157:15 212:6 226:11,12 230:13 231:16 distinction 20:10,11 22:9 38:20 39:22 47:15 58:1 62:14 64:10 72:25 73:19 77:24 90:11,12 90:15 120:22 146:12,14 147:3,5,7 164:3 166:7 167:17 168:9 173:22 178:10 193:22 234:15 235:8 distinctions 27:15 173:20 distinguish 19:13 22:6 28:12 34:17,22 35:1 46:17 73:17 148:6 214:6 distinguishable 113:6 distinguished 27:11 46:23 129:18 133:8 214:7 215:2 distinguishes 20:1 25:15 distinguishing 28:6 distortion 82:2,9,22,23	distribution 233:3 district 18:23,24 21:5,6 disturbing 82:2 dividing 72:21 dmcphail@vcip.us 5:18 docket 130:6 doctrine 44:7 document 32:10 76:24 documents 128:24 Dodger 110:20 doing 33:23 36:9 42:24 80:6 97:24 99:3,18,21 108:1,25 112:5 114:12 115:6,6,16 116:10,12 117:12 120:18,19,19,20 121:17 125:8 126:7,11 127:25 128:14 133:5 138:2,21 139:1,4 140:3 140:17 141:4,8,25 142:1 143:2,3,9 149:4 150:8,12,13 154:9 159:22 178:25 218:15 240:20 244:19,23 Dolby 6:3 8:4,5 180:7 197:12 domain 141:16 Don 7:23 151:2 DONALD 5:12 Doser 215:3,6,7,9,11,16 215:17,20,20 216:4,5,6 216:8,9,14,15,21,22 217:17 221:7 234:25 235:13,16,19,21,22,22 235:25 236:2,7,11 238:15 dot 53:19,22 65:3 double 105:13 116:14 doubt 185:25 down-sample 114:5 118:19 down-sampled 135:1 down-sampling 115:8 118:16 downward 118:12 DPB 95:25 96:4 98:21 Dr 68:7 245:13 draft 123:25 draw 108:17 128:12 137:21 150:13,15 drawing 26:21 137:24 160:20 drawings 119:6 drawn 77:15 219:20 drew 38:20 87:17 drive 88:25 145:12 driver 233:14 drives 13:2
---	--	--	--

drop 95:20 195:9 dropped 97:16 195:25 196:3,6 duality 232:8 Ducker 4:4 7:12 41:18,19 44:25 45:22 46:7 47:5 47:11 48:18,20 49:10 49:18,23 50:4 52:6,15 52:17 62:11,25 63:2,17 64:2,8,16 65:9,14 66:24 due 200:15 duty 24:12 dynamic 174:10 E E 1:17 7:1,1 E-pass 70:11 e.g 200:24 earlier 33:3 52:23 69:5 69:19,24 70:10,15 76:7 78:1,2 87:17 129:19 151:7 183:18,24 187:16 188:24 198:16 205:5,19 207:22 218:16 219:21 220:16 231:1 232:6 238:8 239:12 241:24 245:14 early 79:14,18 easier 19:15 easily 42:16 49:3 easily-understood 42:22 Eastern 1:25 easy 159:16 165:5 eat 163:5,10,11 edge 82:9,23 173:17 edges 82:2,15,21,24 EDIS 245:25 editing 182:3 effect 37:7 75:8,11 171:2 effectively 87:4,18 88:19 effects 220:10 effort 225:3 eight 9:14 10:12 25:2 206:24 231:9 246:6 either 13:24 46:15,20 132:18,20 148:2 173:8 174:18 El 5:6 elaborates 207:9 electric 45:6,8,10,11,12 45:14,17 Electronic 1:7 7:5 247:1 element 22:2 146:24 212:13 elements 19:23 28:6 37:9 84:12 195:5 206:6 212:5	else's 198:20 Emanuel 6:5 8:4 197:11 embedding 127:23 embodiment 21:10 29:4 32:12,17 33:16,18,21 36:3 44:11,16,18 46:9,9 51:22 53:3 54:21 75:1 79:24 92:2,20,20 93:5,9 103:12 114:25 115:20 124:22 126:23,23 127:3 153:6 154:14,19 177:11 227:24,24,25,25 229:18 230:1,5,12,13,23 240:23 embodiments 14:12 16:19 19:3 22:14 40:9 44:14 46:24 89:20 90:2 90:3 92:9 101:21 103:4 112:22 159:18 163:15 163:18 166:15 168:20 201:17 221:24 230:9 231:8 245:11 Emory 3:12 7:12 emory.burns@alston.c... 3:18 emphasis 108:25 emphatically 144:14 emulate 201:14 emulating 201:17 220:9 242:12 enables 216:10 enabling 215:25 encode 66:15 174:21 178:19 179:14 183:2 187:18,19 encoded 10:1 26:1 50:8 50:12 51:4,5,18,24 53:25 55:20,22,23 56:1 56:6,19 57:8,23 58:1,3 59:2 61:6 62:14 63:6 65:18,21 66:12,21 67:23,25 173:1 176:10 176:12,14 178:17,24 179:2,15 181:18 183:10 183:22 188:18,23 189:1 189:4,8,10,15,19 190:3 190:6,8,18,22 191:2,19 191:23 193:10 encoder 9:24 51:13 55:11 56:1 57:17,20 58:8 62:7 63:4,18 encoders 97:18 encodes 57:21 encoding 10:7 55:24 59:23 66:17 172:19,25 178:19 179:10 183:3,5 193:6,10,11,11,16,18	233:19 ends 51:12 198:19 enforces 71:18 engine 45:6,8,11,15,16,17 engineer 128:10 English 109:18 123:20 159:12 160:5 168:17,22 183:14 184:16 198:14 200:25 enlarge 194:20 enormous 10:14 enter 7:8 entire 11:2 19:8 23:17 78:7,9 92:22 108:18 219:2 223:12 entirely 44:6 168:8 entirety 240:7 entities 7:22 entropy 54:1 58:8 61:24 62:7 63:7 Enzo 118:22 equal 46:3 129:7 equals 135:18,21 136:4,5 136:11 139:21,21,22,25 141:7 equate 237:5 equation 112:10,11 127:21 131:7 136:7,8 139:7 221:21 equations 121:16 127:19 129:6 130:22 131:22 139:8,21 erroneously 35:16 error 94:16 errors 63:20 82:12 especially 93:16 105:8 106:8,10 ESQ 2:4,5,14 3:4,12,13 4:4,12,13 5:4,12,13 6:4 essentially 38:8 44:3 95:25 106:8 182:14 207:20 212:15 established 73:20 74:1 75:5,15 establishes 191:20 establishing 76:13 et 204:23 205:3 209:15 209:21 everybody 8:9 146:25 168:17 245:21 everyday 164:16 evidence 15:13 22:17 32:18 109:19,20 111:4 111:4,9 113:14 160:15 193:13 221:12 235:6 237:6 238:9 evident 26:17	exact 51:10 203:2 219:25 exacting 84:20 exactly 17:13 28:11 54:5 63:9,17 64:23 66:24 67:21 89:2 105:17,21 116:25 123:8 128:8 134:16 142:11 144:2,16 160:19 169:9 178:5 181:4 190:7 199:9 218:15 243:19 examination 29:10 examined 21:6 examiner 29:6,11,22 31:7 35:25 36:10 38:22 39:5 39:6 48:14 59:18 60:2 73:10 113:2 129:10,24 131:6,13,21 132:16 164:8 167:4,6,22 168:5 219:25 220:1,8 examiner's 48:2,3 164:7 167:19 168:11 220:8 example 11:2,14,20 12:4 12:11 13:1 14:10,15 16:9 26:23 32:21,21,24 33:1 39:13 50:22 81:19 81:20 93:19 96:1,10 97:12 98:17 101:13 107:9 110:17 114:9 115:8 121:8 137:12 138:17 139:17 141:6,7 165:4,19,24 166:14 168:12 177:15 181:13 184:1,22 186:20 187:5 188:3,12 189:22 190:14 190:24 199:3 200:1,11 200:22 201:15 203:17 205:12 206:24 209:7,11 209:20 211:5 212:21 216:21 217:13,17 219:1 223:14,15 226:14 233:10 241:11 243:8,21 examples 16:4 29:3 82:16 83:3 166:14 177:8 185:13,16 186:12,18 195:3 204:22 208:8 224:12 227:12,17 239:19 excellent 54:12 excerpt 20:20 183:11 187:4 212:21,23 213:8 214:21 exchange 194:4 exchanging 83:5 exclude 15:4 168:20 222:21,22 223:24 excluded 88:8 103:7 excludes 46:8 134:14
--	--	--	---

166:8	F	63:2 65:16 67:6,15 72:8	119:9,9 120:4,7,15,15
excluding 22:14 222:20	F 2:7	72:14,25 73:23 76:12	121:5,9,12,12,17,17
exclusion 22:20 163:14	face 146:3,22	79:24 80:17 87:17	122:7,9,14,15,15
excuse 55:17 68:8 86:24	facially 106:2	89:14,22,23 92:18,18	123:13,17,19 124:24
234:9	fact 24:7 33:15 42:20	92:20,22 94:1,3,8,11	125:1,2,14,15,25 126:1
execution 102:19 149:14	43:15 46:10,21,23	109:19 113:23 115:13	126:3,7 127:16 128:2,9
exemplar 79:24	63:10 91:2 93:17	115:18 125:16,17,21	128:13,17,18 129:5,6
exemplary 40:9 72:9	121:25 144:20 151:8,22	143:2,13,20,23 152:18	129:23 130:1,12,13,20
92:20,23 163:18	152:11 156:22 157:8	153:8,20 154:21 155:3	130:21,22,23,23 131:11
exercise 145:10	160:21 162:1,23 169:4	158:6,8 169:2 173:15	131:22 132:1,11 134:8
exhibit 95:21 214:3 220:8	170:23 171:17 193:13	183:8,9,19 187:14,15	134:10,14,24 135:17,22
exist 12:13 70:24 225:22	193:25 218:15	187:16,16,20,22 188:16	135:24 136:9,12 137:20
232:13 236:4	fact-specific 160:19	202:18 203:11 204:4,5	137:22,25 138:6,6,7,9
existed 148:4	factor 171:6	204:11,18 205:16,17,21	138:10,13,14,16 139:24
existing 200:18	factored 154:7	206:6,7,10 207:1,13,24	140:1,22 141:9,10
exists 70:20 71:24	fails 15:17 103:11	209:25 217:3,5,7,12,19	144:8,9,13,13 145:7,15
expect 20:25	fair 31:17 79:4	225:4 226:5 227:22,23	145:16,19,19,23,25
expert 149:21 156:15	Fairchild 70:4	231:20 233:12 243:1,15	146:1,1,2 147:24 148:2
explain 15:17 27:12	fairly 126:24	243:16,21,21	148:9,11,17,18,23
30:21 32:20,25 45:3	faithful 175:9	figures 142:18,21 153:7	149:4,8,15,18,19,24,24
49:8 50:17 52:4 57:10	fall 15:8 30:22 181:14,15	154:16 155:4 221:10	149:25 150:8,10,16
100:7 102:12,16 119:15	192:20	figuring 171:10	filtered 80:23 83:6
119:18 159:4,6 160:22	false 83:2	file 25:20 26:8 28:4 30:13	filtering 69:1,6 70:22,24
201:24 203:9	fan 110:20	39:8 41:9 179:1 196:9	71:8,12,21,24 72:4,10
explained 25:22 52:19	fancy 10:13	245:25	72:13,19,21 73:1,6,13
85:4 106:3 164:12	far 171:23 175:6 233:12	filed 128:24 130:9 151:8	73:16,21 74:17 75:5,8
233:1 245:13	239:1	151:11,11,12 197:19	75:12,16 76:2,4,14 77:2
explaining 203:18 242:14	Farrah 7:17	246:1	77:10,15,20,25 78:5,9,9
explains 25:19 39:25	fatal 236:10	filing 151:23	78:20 79:1,7,10,19,22
55:19 69:20 81:7,22	favor 74:13 226:1	fill 114:5,6	80:9,13,15 81:11,18
82:8,10 101:10,16	feature 200:18,21,21,24	film 228:5 229:19 231:24	83:15,22,24 84:8,9,15
161:13 182:16 184:9	211:24 213:9,12,18	filmed 199:9	85:3,11,20 86:1,7,9,12
198:9,10 200:14 203:5	219:14 230:10 231:4,6	films 221:24	86:16,18 88:1 89:4 90:5
204:6,12,15,19,20	231:9 232:12,16,18	filter 52:12 63:20 68:22	91:14,23 92:1,3,8,24
205:24 206:9 207:2,25	features 127:7 200:10	71:22 72:6,9,11,23	93:1,4,5,6,11 100:9
217:23 220:17	February 20:15 26:23	73:15 76:1 77:7,10 78:4	102:25 103:9 108:5
explanation 18:15,19	federal 15:10 18:2,2,13	78:13,14,16,16,25	132:13,19 147:21 149:5
20:24 21:4 34:11 38:6	18:20 19:6 21:11 22:18	79:12,25 80:6,8,14,16	150:17
39:4 103:11 109:11	24:5,10 32:17 34:5,9	80:19,22,23 81:13,21	filters 78:10 79:2 80:2,5
139:18 152:6,10 168:12	35:12,14 52:19 69:1,14	81:22 82:10,13 83:3,9	80:10 81:21 82:5
explanations 88:4	69:17 70:4 71:1 74:7	83:14,16,25 84:1 85:11	100:19 101:12,17,24
explanatory 105:4	85:4 90:20,24 104:21	85:14,15 86:11,18,19	102:7 103:8 104:2,6,13
explicit 74:22	106:3 121:2 123:22	87:7,11,12,13,22 88:7	105:3 106:9,10,14
explicitly 26:9 38:10	124:2 127:6 160:6	88:11,12,23 89:8,14,20	107:6,8,18,18,20
express 69:16 70:14	161:8 165:5,8 176:19	90:1,6 91:16,24 92:23	111:12 113:14,19
expressed 76:8	186:2	93:7,10,11,12 94:9	116:11 117:6,6 120:9
expressions 22:20	feed 217:20	100:18,18 101:6,8,9	120:10,13 122:9,13,19
expressly 38:5 57:5 71:9	feel 146:14	102:6,7,15,16 103:1,15	122:21,22,24,25 123:1
73:20 132:9	felt 166:25 237:13	103:16 104:1,1,6,14	123:3,18,18 124:6,23
extend 124:15	fewer 9:25 14:6 95:20	105:3,16,24,25 106:13	125:1 126:14 127:16
extent 85:24 128:20	field 22:2	106:13 107:5,6,15,16	129:18,22 130:3,11
179:10,19 193:18	fields 21:20 22:1	107:22,23 108:6,6,16	132:9,20,23 134:7
extra 159:18 174:21	fight 144:24 145:1,5,9	108:19,20,21,21 109:10	138:12 145:24 147:12
extreme 174:6	figure 16:9 37:13,13	109:13 111:18,18,18,20	148:15 150:16
Extremely 245:6	38:18 51:22 52:7 53:3	111:20,25 112:7 114:21	final 58:19 67:17 208:5
extrinsic 221:12 235:6	54:21,21,22 57:20 58:2	114:22 115:5,10,15	finally 48:2
237:5 238:9	60:21,23 61:1,14 62:15	116:15,22 117:5 118:19	find 88:24 124:3 138:12

193:19 244:17 finder 24:6 fine 62:9 68:13 83:1 100:4 123:3 195:1 245:3 fine-tune 208:6 finish 92:1 finished 218:13 firm 7:21 first 8:20,21,23 9:16 12:1 14:5,23 15:18 16:7 23:14 25:16,20 35:3 36:17,25 37:5 38:2,23 38:25 40:11,13 41:6,25 42:10,11,13,25 43:4,10 43:12,14 44:18,20 45:7 45:8,22 46:5 48:24 49:2 50:11 53:8,13,16,17 54:18,18 55:4,11 58:17 58:20,21 59:12 60:3,4 64:20,21 67:10,12 68:10 69:12,15 74:16 84:16 94:23 103:2 107:14 113:24 120:8 121:25 122:7,22 123:8 133:12 134:6 135:16,19 136:20 139:24 141:13 143:19 147:21 161:3 162:7 169:2 174:20 175:14 177:4 179:9,20 180:18 181:7,19,24 183:9,11,12,17 184:18 186:16,22,23 187:6,18 187:21,23,24 188:3,5 189:5,6,10,15,19 191:2 191:23 195:8 206:6 208:10 214:21 215:18 216:16 218:2 227:6,23 232:23 235:1,11 238:6 239:23,24 240:13,18 242:25 FisherBroyles 4:14 5:5 7:25 fit 199:24 244:10 five 155:11 228:17,18 fix 63:20 197:24 fixed 98:8 164:1,3,5 fixes 89:3 fixing 59:15 138:22 flatly 236:2 flaw 236:10 flew 8:6 flickering 197:22 198:23 Floor 2:16 flowchart 153:21 154:1 155:5 158:2,5,8 flowcharts 170:18	flows 217:8 fly 100:1 flying 118:1 focus 19:24 23:13 205:15 230:18,19 231:10,12 focused 22:4 233:5 folks 217:13 follow 68:14 154:3 follow-on 151:13 follow-up 30:3 62:9 134:3 followed 73:1 following 36:9 follows 29:17 69:22 73:5 114:15 football 114:1,8 foregoing/attached 247:5 247:14 form 36:22 38:7 39:17 61:20 75:2 82:7 218:9 formed 70:5 forming 62:2 66:11 forms 37:6,11 66:17 82:17 formula 59:15 formulation 73:10 forth 114:18 fortunately 109:20 forward 100:1 128:24 196:4 found 82:8 132:4 175:18 178:19 four 96:3,10 99:10 115:14 155:11,11 164:18 172:19 frame 10:11,17,18,18,21 10:22,23 11:2,9,14,18 11:21,23 12:1,23 13:4,7 13:24,25 16:3 17:4 19:18,18 37:15,23,23 52:8 53:5,7,10 54:2,4,4 55:3,12,14 63:10,11 67:8,10 80:5 87:14 95:18 96:3,5,11,12 97:3 97:25 99:10 101:22,23 103:6,7 197:20 frames 10:13,13,14 11:11 11:20,24 12:21,24,24 13:5,6 53:2 81:2,2,5 82:21 96:17 97:13 98:2 99:10 Francisco 4:7 frankly 169:6 free 31:23 frequency 141:16 Friday 1:20 221:19 frighten 127:18	fringe 82:25 front 45:11,11 196:5 200:12 full 21:16,18 58:11 103:18 135:4 173:8 199:14 fully 29:10 63:18 199:20 232:25 function 71:18 72:11,12 93:3 108:16 112:11,13 112:14 121:18,19 122:1 127:22,23,24,24 128:1 140:11 functional 70:18 102:17 108:14 128:3,8,19 functions 100:8 102:24 108:14,24 112:17 113:20 121:23 127:21 137:24 145:18 fundamental 24:11 74:20 107:1 further 15:1 24:2 49:17 57:1 60:9 62:10 68:4 80:25 81:1 89:11 96:22 109:11 112:1,25 128:21 129:24 150:5 152:6 155:23,24 156:4 161:19 161:20 173:22 195:22 207:5,6,9,23 208:11 211:17 218:4,5,8,14,23 219:1 229:1,3,12 242:23 243:8,18 244:7 244:10,16,23 245:19 future 81:1,4 G G 4:15 7:1 112:6 gain 227:14 game 110:23 114:1,8 123:7 gamut 226:7 gas 45:6,8,11,15,16 general 7:15 18:15,18 20:24 21:3 30:19 34:11 185:10 198:5 generally 74:24 185:9 201:2 generated 21:24 generates 100:10 147:22 generating 216:18 242:9 generator 217:8,10 generic 71:19 genuine 105:8 geometric 153:1,15 154:3 156:10 160:11 164:15 164:19,23 165:2,13,14 165:15,18 166:3,7,17	166:19,19 167:5,9,18 168:5 169:4,7,8,10,14 169:21,25 171:16,17,20 171:21 geometrical 166:2 geometry 162:20,22 165:20 166:1 167:8 169:19 Georgia 3:7 getting 29:16 94:24 140:10,20 220:19 238:3 242:16 GF 102:16 103:1 104:1,6 112:2,4 119:8 122:7,9,9 122:13 148:2 GFE 101:17 105:25 GFH 101:17 104:1 105:24 106:9 121:12 124:24 GFV 104:1 106:9 121:12 147:11 GFVH 147:10 GH 117:5 gibberish 156:4 Gift 70:13 give 18:4 24:6,18 34:4 35:8 39:11 59:20 60:23 82:1 110:17 121:3 137:15 139:17 156:16 165:19 168:12 180:8 190:14 197:15 199:2 209:11 223:14 233:10 given 10:17 36:20 50:17 97:8 221:19 242:21 gives 37:7 66:14 154:23 161:9 194:16 195:3 204:21 227:12,17 giving 21:3 36:3 59:3 75:8,11 189:9 go 8:13,15,19,20,21 9:9 9:16 13:5 14:20 34:3 49:21 52:3 53:25 54:2,3 55:8 63:2 64:17 67:25 68:10 89:13 98:5 104:2 106:24 110:10 111:3 130:5 154:10 155:10,11 159:4,25 165:22,23 166:9 167:15 169:19 173:23 176:11 177:18 180:12 181:22 188:12 190:11 195:22 197:10 199:7,14,16 221:4 223:13 224:12 225:3 229:12 232:4 242:21 246:5 goal 179:17 227:7 goes 14:11 28:3 29:10
--	---	---	--

46:11 55:25 57:13 67:16 80:6,19,20 107:10 112:1 114:3 129:14 131:6 152:18 154:1,2 201:24 203:9 228:24 235:14 243:25 going 8:18,19,24 13:7 15:7,14 18:15 23:13 34:3,3,6 36:12 41:19 50:4 56:15 60:20 62:7 64:10 66:2 68:7,19 76:21 109:21,23,23,24 110:4 111:3 113:21 114:5,11,13,14 116:15 116:20,20,22,23,24 117:7,8,9,20 118:3,5,6 118:7,8,8,9,9,10,17,18 118:18 119:4 125:4 126:3,5,8,9 134:23,24 134:25 135:1,5,12,16 135:17,18,19,21,24,25 135:25 136:2,10,10,11 136:15,16 137:14,17 139:10,15,19 140:4,6,6 140:7,9,21,24 144:2,23 145:1,2,5,8,21 149:21 150:14,15 151:4 152:21 154:8,11 156:13 158:21 163:8,8 168:12 169:7 171:24 172:22,22 173:2 173:2,11,22,24 174:1,4 174:4,5,15,16,16,21 175:6,8,13,14,15,20,24 176:5 179:14 185:4 193:6,9,15 194:13,21 195:1 196:2,4 197:16 197:22 198:11 202:22 203:4 205:17 207:1 208:25 209:24 211:2 217:6,11 221:9,17 223:13 225:2,25 226:14 226:18,19,21 227:8 229:12 230:12 233:15 233:16,18 234:10,25 238:4 good 7:10,17,19,20,24 8:3,22 9:1 23:7,8,12 41:18 76:23 81:18 95:17 106:21,22 107:9 151:5 158:15 166:25 173:8 179:3,3 180:6 181:21 190:12 192:22 197:12 205:16 246:10 Google 110:10 gotcha 123:21 Gothing 8:6 Goulet 4:12 7:24,25	governing 83:9 gradations 174:8 graded 181:25 grading 182:2,23 198:1,5 198:8 222:5 grammar 69:3,20 70:15 76:6 108:4 109:16 123:7 124:17 grammatical 69:18 grammatically 75:7 graphics 7:13 great 61:2 97:13 171:24 172:14 173:4 223:10 green 103:19,23 105:23 212:1 213:3,15 ground 24:25 201:11 202:8 242:1 group 28:20 80:1 108:12 111:12,18,18 114:22 119:7,9 127:15 128:2 129:6 130:22,23,23 131:11 133:6 201:25 220:9 grouped 50:5 102:7,25 104:11 105:2,18 107:6 109:9,13 110:7 111:5 112:7,7,19,23 119:8 120:3 121:9,12 122:2,4 122:6,9,10,13 123:13 123:19 124:23 125:1,2 125:10 126:14 127:15 127:17 134:7 144:7,8 202:4 grouping 113:12,12,19 113:20 119:4 groups 203:12 231:21 guess 41:21 134:12 138:4 140:19 205:4 219:25 guessing 175:8 guidance 52:21 85:6 guide 37:10 52:23 54:12 125:6 guise 232:20 GV 117:5 H H 114:1 H.264 13:15 16:25 17:5 H.265 17:6 hack 117:16 half 139:21,22,22,24 140:2,6,7 235:14 hallucinated 235:15 halos 82:20 Hamilton 186:3 hand 114:15,16 201:4 210:20	handle 68:7 76:22 99:2 101:1 handled 8:23 happen 78:15 79:19 103:8 114:11 117:15 118:6 141:15 243:10 244:15 happened 29:13 79:10 87:20 168:14 happening 64:23 115:4 140:15 148:11,18 159:20 happens 142:23 203:25 205:11 243:10 244:6 happily 192:5 happy 23:2 62:12 89:12 158:21 159:4 180:1 194:6,12 237:11 hard 134:4 143:16 hardware 102:19,21 149:1,13 hardware-specific 102:17 hate 150:6 HDR 115:8 headline 41:22 hear 66:23 84:24 193:9 193:22 196:4 heard 26:14 41:14,15 42:2 84:16 88:5 92:14 144:18 151:20,21 158:17 159:20 161:14 161:18 169:22 175:5 180:16 191:9 193:23 194:11 196:12,19 hearing 1:13,24 7:4 9:5 25:1,2 133:15 193:3 194:24 246:11 247:3,4 247:4 heart 222:21 heavily 109:21 height 154:16 162:16 166:13 held 27:21 69:14,17 70:11 110:24 help 36:14 45:3 172:23 174:17,22 175:15 197:15 helpful 49:9 79:23 87:16 197:15 224:20 231:11 245:22 helping 216:11 helps 54:14 148:6 174:25 199:21 209:13 238:22 hesitation 149:16 hey 120:25 136:6 234:10 234:13	Hibbs 28:6 high 9:19 15:12 19:9 22:15 34:12 95:18 116:6 182:5,5 197:25 high-definition 114:2 high-end 198:18 higher 95:18 97:7 highlight 53:7 240:6 highlighted 14:12 15:21 79:24 83:17 167:7 168:1 189:5 211:19 212:1 213:1,10,13,15 229:23,24 237:2 240:7 242:5 highlighting 17:21 178:18 214:2,3,4 highlights 19:15 highly 32:18 85:7 235:14 Hisense 4:11 5:3 7:25 68:16 history 15:10 17:14 19:8 21:16 25:20 26:8 28:4 30:13 33:24,25 34:20 39:8 41:9 44:12 56:5,13 69:7 73:20,23 74:8 76:12 84:23 109:25 119:17,24 128:21,22,23 130:4 146:12 163:21 164:13 167:2,4 168:14 179:1 213:22 232:22 238:12 hit 110:18 113:2 144:1 hitting 173:17 hold 194:23 holds 161:15,22 home 88:25 110:19,23 145:12 182:7 184:10 198:20,21 205:7,12 honestly 164:24 Honor 7:10,18,20,24 8:2 8:3,5,12 9:1,8,10,17,20 22:12,25 23:7 32:22 33:2 35:7,8 41:18 68:7 68:15,19,21 75:24 76:16,22,23,25 78:22 86:25 88:19 89:11,19 90:14 91:21 92:14 94:5 94:12,19,21 97:1 106:17,21 107:9 109:3 113:22 115:1,22 117:16 119:2 120:6 123:2 127:10 128:12 132:25 143:18 144:23 146:8,16 151:10 152:13 154:10 158:15 159:10,25 163:2 166:10,22 168:15 169:1 171:14 172:15 180:5,6
---	--	---	--

180:11,13,16 181:13,20 184:17 185:4,17,24 186:21 187:15,24 188:10,21 189:3,16 190:8 191:7,14,21,25 192:4,11,19 194:2 195:7,8,23 196:10,23 197:2,9,12,25 198:14 199:1,5 200:20 203:14 203:17 204:24 206:23 207:8,13,18 208:5,16 209:13,25 210:8 211:16 212:6 214:1,23 215:4 216:22 217:18 218:11 218:18 219:7,10,18 220:16,23 221:3 224:7 229:22 230:25 232:23 236:16 237:11 238:2,3 238:11,24 239:7,19 240:6 241:6 242:15,21 245:1,6,8,19 246:4,8 Honor's 144:1 HONORABLE 1:3 hope 134:4 152:9 174:1 246:9 hopefully 36:13 152:12 197:15 horizontal 11:1 100:18 103:15 104:1 106:13 107:18,22,23 111:18 116:11,15 120:10,14 122:22,25 124:23 126:14 129:20 130:13 130:20 131:4 132:1,2 132:19,21 138:14 145:25 148:2 149:15 153:8 155:6,7,7 158:4 158:11 horizontally 118:11 horse 113:1 hour 133:13 hue 227:15,16 huge 169:9 hybrid 14:7,16,18,22 29:4 36:23,25 37:2,6,8 37:11,14,21,22,25 38:6 38:7,12 39:11,13,18,19 39:20,21,25,25 40:12 40:20,21 41:3,5,8,12 44:13,17,19,21,23,23 45:4,5,9,13,13,18,25 46:3,5,6,11,12,16 47:15 47:19,22,23,24,25,25 48:13,15,21,22,24 49:1 49:11 50:25 51:5,7,17 51:20,24,25 52:10 53:18,21 54:10,17,25	55:14,16,17,19,23 56:1 57:23 58:12,17,22 63:5 64:22 67:2,13,19 hybrid-hybrid 49:6 hybrids 46:2,4,5 49:14,14 hydrogen 45:17 hyphenation 247:12 hypothetical 227:9,9 I I-pictures 37:18 i.e 20:16 26:25 idea 77:18 90:20 96:17 149:7 153:15 169:12 171:5 229:16 ideas 153:9 identical 43:22 49:14 151:14 identification 247:13 identified 13:19 24:14,16 38:22 53:12 185:15 224:22 identifies 28:24 37:2 57:5 57:24 59:5 60:13,14 71:23 73:18 identify 39:21 40:6,17 59:1 185:2,8 illustrates 153:8 illustrating 205:16 image 57:21 61:20 62:2,2 65:19 67:17,17 80:5 81:4,5 82:14 87:14 90:7 95:15 96:8,8,18 97:4,6 97:10 98:11,12 100:10 100:12 101:3,15,16 103:25 113:15,17 115:11,12,25 116:1,2,3 116:13 117:7,8,25 118:17 126:9,9 135:4 135:14 147:22,24 209:5 209:6,14 210:19 215:14 216:3,3,25 217:5,11,11 217:14,15,24 218:10 222:14 223:7,16 224:15 224:16 226:9 227:11,19 229:9 233:8,24 237:2,5 238:22 240:20 244:8,10 244:13 images 53:2,6 65:23 82:21,24 95:23,24 96:3 96:4,10,16 97:20 99:1 116:4,5 117:25 135:3,8 imagination 141:20 imagine 97:3 IMAX 199:7,8,14,15,17 immediately 16:11 implantation 70:6,6	implementation 72:20 144:25 145:2 implementation's 73:6 implementation-specific 89:5 implemented 228:2 implications 146:15 implicit 90:21,25 91:8 implied 165:12 implies 39:16 165:9 import 40:1 42:6 43:1 56:9 109:9 important 26:20 29:9 30:10 37:12 42:7 47:14 57:12 90:12,15 126:19 130:15 215:16 218:22 importantly 92:22 161:12 imported 42:3 importing 75:22 125:6 219:9 245:10 impose 69:3 76:6 102:20 205:9 imposes 71:7,25 imposing 93:21 impossible 161:24 200:17 201:9 improper 161:4 168:21 237:6 improperly 22:14 75:22 84:11 219:9 in-house 8:5 include 28:19 43:9 48:16 65:8 148:15 166:7 169:25 184:3,14 186:5 201:17 207:16 208:2 209:3,8 219:17 222:13 227:14,15,15 included 29:3 38:5 88:21 103:14 142:8 includes 53:5,10 104:12 212:8 232:11 237:21 242:7 including 1:8 7:5 57:8 59:19 67:23 92:8 95:6 138:8 146:20 186:1 211:20,23 213:4 247:1 inclusive 237:21 inconsistency 59:6 inconsistent 234:22 incorrect 218:12 increase 116:24 independent 39:2 43:8 46:1 50:23 59:18,21 73:15 102:25 108:7,11 111:17 119:14 121:2 123:5 152:1 161:21,25	164:1,3,6 222:16 independently 27:9 110:2 110:6,25 132:15 139:1 150:12,13,23 218:24 219:4 222:14,15 index 126:1 indicate 18:4 47:2 119:6 133:4 184:2,5 243:3 indicated 61:5 132:8 indicates 12:7 110:1 184:3,3 indication 19:2 indirect 118:24 individual 80:7 139:8 199:25 200:18 202:2 203:23 230:4,7 239:13 241:1 industry 17:3 inference 161:10 inform 209:8 212:9 information 12:7 13:23 143:1 174:17,24 175:3 175:11,12 184:2,3,14 209:9 212:10 215:21 216:1,2,2,3,19,20,23,24 216:24 222:23 223:6,6 224:9,11 227:8,13 228:11 229:9 infringement 145:22 170:13 infringing 144:24 initial 209:7,10 210:22 243:2 initially 54:6 73:8 inject 104:10 178:24 179:14 225:20 232:20 injecting 179:7 injection 178:17 injects 104:15 inner 173:20,23 input 51:18 55:1,4,7,20 58:7,13 61:15,16,22 62:4 136:22 141:3,24 217:4 inputs 162:21 inside 82:12 87:20 120:14 121:20 instance 36:24 92:18 97:3 97:16 99:9 122:22,23 123:10 143:1 144:6 147:7,9 216:22 instruction 149:14 instructive 85:7 instructs 146:24 insufficient 185:19 insulation 70:5 integrate 206:14
---	--	---	--

integrated 206:11 integrating 138:2 intend 240:21 intended 18:16 152:10,11 173:11 201:2 227:11 intent 18:4,11,21 20:22 198:13 199:2,20 205:9 inter 13:10,13,21 14:11 14:22 17:16 19:18 20:6 20:11,20 21:23 22:5,6,9 22:22 24:21 25:15,18 27:3 36:21 37:13,15,16 37:23,23 38:4,7,17,23 39:1,14 40:11,15,18 41:7,12,13 42:23 43:1 43:10,15,17 45:2,22 46:1,12,21,24 48:1,16 48:23 53:10,13,13,17 54:4,19 55:5,13,13 56:12 57:4 58:18,21 59:19,24 60:4,7,11,14 62:21 63:11,24 64:4,21 67:10,12 inter-inter 47:22 48:21 inter-intra 14:17 38:8 39:20 44:24 45:1,1 50:8 inter-intra-intra 47:22 Interactive 70:13 interchangeably 54:8 185:13 interconnected 110:14 InterDigital 2:3,13 3:3,11 4:3 7:16 41:19 109:6 118:14 126:24 130:17 interest 221:18 interestingly 191:17 236:15 intermediate 137:8 internal 72:22 International 1:1,16 247:6,11,18 interpolate 116:15 137:17 interpolation 98:14 99:7 100:20 101:6,8 107:15 111:13 113:14,19 115:2 117:5 119:10 121:19 122:14 125:25 126:7 130:1 132:19 145:4,19 147:14 149:5 175:8 interpretation 24:7,9 119:22 180:23 234:23 237:9 interpreted 27:20 73:11 170:14 186:4 interpreting 150:19 185:22 186:6 191:1	196:16,18 interrupt 96:20 interrupted 190:11 intervenor 6:3 8:4 25:8 56:25 180:7 185:6 191:4 197:12 208:17 219:9 229:15 246:8 Intervenor's 209:22 Intervenors' 36:19 Intervenors's 210:17 intra 12:18 13:13,21 14:10,22,23 15:5,19,20 15:23,23 16:2,5,10,14 16:23 17:2,10,15,20 18:17,19 19:18 20:3,9 20:18 22:5,10 25:10,12 25:15,16,20,25 27:2,18 29:25 30:5,9,19 33:4 34:20 35:4 36:21 37:13 37:15,16,17,19,20,23 37:23 38:3,6,17,22,25 39:14 40:11,15,17 41:8 41:12,13 42:2,4,23 43:9 43:15,16 45:22 46:1,13 46:21,23 47:3,8 48:1,8 48:13,16,23,24 49:11 52:8 53:5,7,8,17 54:4 54:18 55:3,11,12 56:12 57:4 58:12,18,21 59:19 59:23 60:4,7,11,14 62:21 63:10,24 64:4,21 67:8,10 intra-inter 40:6 44:13,17 45:1,24 46:16 47:19 49:13 50:9,12,13,25 51:5,8,17,20,24,25 53:18,21 54:10,10,17 54:25 55:15,16,18,20 55:24 56:1,6,7,19 57:8 58:17,22 61:6,6 63:5 64:22 65:7 67:3,14,19 67:23 68:2 intra-intra 37:19 48:21 intrinsic 30:14 40:3 87:23 89:9 104:13,16 105:5,17,20 109:19,20 111:3,4,9 113:13 144:4 144:7 178:2,6 193:25 238:10,13 invalid 66:7 invented 29:8 invention 14:13 29:12 31:5 99:5 100:3,15,15 100:17 108:10 109:24 111:10,12 112:21,23,23 113:9 114:20,23,25 115:13,15,19,21 117:2	117:12 118:22 119:1,4 124:20,21,22 125:13,18 125:21,22 126:6,11,14 126:15,21,25 127:5,9 132:17 133:3,7,9 142:19,20 143:8,22 145:15,24 148:1 177:19 201:17 214:6,7 215:13 217:14 222:25 223:1,8 230:2,20 240:24 241:13 invention' 127:8 inventions 104:23 127:4 inventor 18:16 29:8 31:4 31:4,14 35:24 36:4,4,9 136:6,20 142:17 215:17 215:18 216:15,16 238:19 inventor's 30:16 41:10 inventors 13:19 14:4,7,19 104:22 inverse 52:11 54:1 175:7 investigation 1:6 7:4 105:12 117:22 151:4 190:25 208:19 247:2 invites 145:8 invokes 104:18 involve 18:25 59:23 101:11 157:14,24 170:15 involved 69:9 89:21 90:1 involves 17:20 18:18 25:25 34:9 89:17 ion 70:5 IPR 95:3 102:8 151:7,8 151:10,11,13,14,18,23 irrelevancies 109:16 isolated 19:7 isolation 21:15 issue 25:9 47:17,20 62:17 68:24 74:13 87:2 90:10 95:1 107:3,13 108:3 116:2 118:22,24 131:19 140:13 147:1 150:11 152:1 155:16 157:19 159:2 183:1 184:12 187:24 191:3 208:13 210:1 issued 29:24 issues 82:25 84:4 109:8 196:2 208:18 Itakura 214:8,8,15,17,19 214:22 215:2 232:23,25 233:3,6,20,21 234:1,5 234:10,18,22 ITC 35:11 123:22 124:2 item 142:5	J Jackson 110:19 Jagan 247:7 James 5:4 8:2 68:15 james.lin@fisherbroyl.. 5:9 job 156:24 181:21 205:16 join 151:13 joint 112:5 128:24 130:1 jointly 94:23 95:8 98:15 99:5,13,18,21 101:5 102:6 104:4 106:14 107:1,4,11,13 109:16 110:1,11,23 111:13,14 111:21,22,23 112:24 113:1 116:21 119:9,12 119:15,19,19 120:3,5 120:13,19,22 121:6 122:20 123:9,11,12 125:9,10,14 126:18 127:12 128:2,22 129:9 129:16,23 130:7,10,12 130:19 131:19,25 132:2 132:7,10,13,15,18,25 133:5 138:21 140:24 142:2 144:21,25 145:4 146:15,18,21 147:4,12 148:3,7,9,12,15,22 149:3,5,10,20 150:3,8 150:11,19,24 Judge 1:4,25 7:3,19 8:8 8:16,22 9:4,9 23:1,4,6,8 23:11 30:2,17,25 31:19 31:21 32:20,24 35:20 36:11 40:19,23 41:2,11 41:16 44:22 45:19 46:4 47:1,10 48:6,17,19 49:5 49:15,21,25 50:3 52:3 52:13,16 56:17 60:20 60:24 61:2,9,13,16,23 62:3,8,13 63:1,15,23 64:5,9 65:6,11 66:3,22 68:3,11,13,18 76:19 77:23 78:18 86:3,6,13 86:22 87:1 89:13,16 90:9 91:20 92:5,13,16 93:23 94:4,6,14,20 96:20 99:17 106:19 117:19 133:11 134:2,6 134:12,17,21 136:13 137:10 138:4,15,19,25 139:6 140:19 142:5,10 142:14 143:12,15 146:7 146:10 147:2 148:8,17 148:21 150:1,4,25 157:19 158:13 159:6 165:1,17,21 168:24
--	---	--	---

169:5,22 170:8 171:13 172:12 180:3,10,12 187:11 189:21,24 190:5 190:10 192:2,6,10,13 192:18 194:8 195:6,15 196:7 197:1,6,10,23 198:25 220:25 221:4 223:25 224:3 237:13 238:1 245:3,7,17,21 246:9 July 38:13 59:17 109:4 129:15 jump 83:12 92:19 jumped 134:13 jumping 84:23 justification 33:23 105:1 232:19 justify 59:3	171:15,18,25 173:2 176:22 177:21 178:9,14 179:18 184:11 190:15 190:17 191:5,25 192:8 193:7,7,8 194:4 196:3 196:15 197:21 199:4 210:24 212:14 225:24 228:9 231:5 234:11 238:3 knowledge 182:19 184:11 known 13:14 14:2 17:20 18:9,14,17 19:22 20:7 26:10,18 31:10 33:5 34:9 82:4,11,22 95:14 101:1 181:25 197:21 198:6 204:21 220:14 knows 15:5 32:9 159:12 159:13 164:17	186:8,9 245:13 lawyers 126:20 lay 181:20 layer 70:5,7 233:4 layered 233:19 laying 181:21 lead 145:8 170:17 leap 235:10 leave 109:16 245:16 leaves 23:22,23 24:17 76:15 Lee 7:15 left 11:15 12:12 15:22 16:5,10,11 17:4 33:12 54:20 58:3 80:19 82:18 82:23 94:1 95:21 115:24 116:3 135:11 167:25 173:16 204:5 221:6 236:12 length 169:19 Leslie 7:15 let's 49:25 85:7 107:1 108:3 120:5 124:19 133:13 135:16 138:12 139:21,23 140:4 141:12 171:22 174:5,6 181:23 186:19 188:3 202:5 206:5 208:10 210:6 219:1,2 222:11 223:16 225:8 234:3 235:10 239:22 240:4,22 241:8 241:12 243:13,23 level 9:19 72:24 84:25 157:20 197:25 lexicography 15:9,11 18:1,3,20 21:8 22:16 34:13 46:14 56:2 84:17 84:19 160:12 176:1 178:25 180:1 185:19 215:10 225:6 238:17 lightning 114:3 Ligotti 2:14 7:12 76:21 76:23 78:3,22 86:5,10 86:14,24 87:4 89:15,19 90:14 92:14,17 93:25 94:5,12,15,21 97:1 99:20 108:9 142:6 143:18 146:8,16 147:6 148:14,20,25 150:2 liked 52:22 likening 236:1 likewise 71:4 124:25 limit 28:10 29:12 87:10 87:13 164:22 165:14 173:21 limitation 39:24 43:12 58:19 69:23,24 73:17	75:23 76:10 79:5,8 83:20 84:8,13 85:25 87:5,5 88:18 109:10 129:17 130:25 161:25 169:17 170:6 171:11 212:17 229:5,11 245:10 limitations 16:19 35:17 85:2 93:16,21 125:6 159:17 206:15 212:17 221:13 244:9 limited 16:15 17:12 19:3 25:2 28:16,23 31:3 51:15 141:20 157:23,24 165:13 limiting 34:11 59:15 222:18 225:11 limits 127:8 Lin 5:4 8:2 68:12,15,15 68:19 90:10 91:21 92:11 94:8 line 70:3 94:3,17 108:17 121:24,25 126:13,16 137:21,24 160:20 188:14 191:16 linear 69:4 lines 44:15 77:15 89:24 92:17 101:6 111:19 113:11 120:16,20 121:5 124:21 129:20 138:23 143:21 149:7 157:17 182:17 183:1,7,20 184:25 185:14,14,15 187:5 188:16 189:12 198:3,9 200:9,15,23 201:16 202:1,15,25 203:6,9,20 204:7,13 205:24 206:9 207:2,9 207:15,25 212:22 213:8 215:5 229:23 238:8 239:25 240:8 242:6 link 206:23 linkage 27:6 listed 24:24 listening 246:5 lists 187:5 211:18,21,25 literally 201:4 223:23 235:19 242:2 litigation-inspired 225:6 little 9:4 19:15 28:1 36:14 45:2 49:5 77:21 82:18 84:6 112:11 145:12 148:25 149:18 158:16 161:13 165:5 172:3,21 174:21 175:7,17,22 192:22 193:3 196:21 199:18 200:3,5 218:21 222:11 226:15 232:24
K	L		
K 5:15 Kayley 7:23 keep 45:17 242:16 Keeping 12:4 keeps 198:23 kept 129:2 130:10 Kevin 6:4 8:3 180:6 197:11 kevinchu@quinneman... 6:9 key 10:10,16 36:24 38:2 53:15 69:1 157:12 210:5 kicked 129:9 kids 163:5,9 kind 27:24 41:22 88:25 102:3 114:8,17 115:22 140:20 160:19 182:11 188:13 208:19 210:22 215:9 223:15 227:13 232:8 238:16 kinds 34:10 227:18 knew 17:11 43:17 51:4 232:15 knock 166:11 know 9:20 17:9 32:7,8,13 32:14 33:20 48:24 49:7 52:1 60:22 62:10 64:13 71:14,16 91:1 112:25 123:25 125:5 126:20,20 134:21 136:6,7,15,15 136:15 137:3 139:19 140:12 141:6 143:6 145:13 147:7,9 149:11 149:18 151:4 156:15 159:19 160:18 165:6,7 165:13,20,25 166:1	labeled 92:7 207:14 217:4 labeling 72:22 labels 37:13 73:7 landing 118:8 language 21:7 26:21,24 27:8,19 40:8,10 43:25 43:25 44:1,3 69:2 71:17 72:15 73:21 74:5,12 75:8 83:11,12 86:8 87:3 87:3 91:22 93:18 104:11,25 105:9,22 109:21 111:16 112:20 115:1 122:16 123:9 128:8 129:2 133:1,3 144:4,6 145:7 146:3 148:12,15,22 149:3 150:19 152:23 153:9 157:9 159:17 165:16 167:24 170:11 176:9,21 176:21 178:20 179:25 189:2 210:6,9,24,25 211:17 237:15 241:7 244:18 Lareau 3:13 7:14 221:3,5 221:5 224:2,6 237:19 238:2 245:6,8,9,18 large 10:7 97:11,14 140:13 243:11 larger 73:4 97:25 98:18 98:21 99:12 100:3 larger-resolution 99:1 laser 44:1 Lastly 128:20 law 1:4 7:21 18:2,2,20 21:12 22:18 26:6 90:20 90:25 118:2 160:15		

233:17 236:9 239:18 lives 37:10 LLP 4:14 5:5 loading 199:1 local 73:12 162:17 163:16 234:12 locate 25:12 35:5 located 62:16 locating 15:3 16:16 17:22 19:12 20:2,10 22:11 24:22 26:3 28:14 29:20 34:20 35:1 location 28:24 62:22 64:24 247:3 locations 81:24 205:2 lock 108:15 logic 69:21 70:15 74:6 75:20 76:6 logically 69:23 long 62:22 70:3 90:5 110:25 119:21 181:24 198:6 209:18 246:4 longer 45:12 63:8,21 208:24 look 11:13,16 13:5,7 16:22 17:1 19:7,10,16 33:16 34:16 47:13,14 58:7 65:18 67:20 82:17 85:7 91:7,11,19 102:5 110:22 111:8 113:11,23 116:24 118:9,25 120:14 125:5 135:19 142:17 152:15,19,21 154:22 155:18 156:25 157:1 176:23 177:9 179:8 183:16 186:21 187:20 189:22 188:9 198:18 199:22 201:1 215:11 217:3 224:20 225:8 226:18,19,21 231:3 235:10 240:4 241:12 look-up 207:16 looked 17:17 18:24 34:18 187:15 211:3 looking 12:23 13:24,25 22:19 33:5,13 97:10 116:14 153:17 155:5 189:1 192:9 196:25 198:19 205:23 looks 13:2 40:20 83:6 96:22 198:17 224:12 227:13 235:17 240:21 lookup 217:20 loop 80:3,17,21,24 93:3 looping 93:4 loops 93:6 loose 170:24	Loral 70:4 lot 10:19 23:15 44:12 58:6 61:18 97:9,9 98:4 120:1 128:13 159:11 173:1 182:8 188:22 195:3 221:9,23 225:3,5 227:17,21 229:16 230:20 235:17 239:5,6 lots 97:14 louder 179:5 low 95:19 97:3,6,19 low-bit-rate 97:10 lower 82:23 95:20 96:2 96:12 182:8,9 200:5 lower-resolution 97:20 114:6 lowest 233:11,14,14 Luminara 74:1,9 lunatic 114:14 lunch 133:12 142:15 163:6 LUT 217:20 M M7.60 237:1 Machida 38:14,16 machine 207:17 macro 11:7 14:13 28:19 28:22 57:23 macroblock 16:7 46:21 magnitude 135:12 main 104:10 123:1 mainstream 230:2 240:25 241:11,14,18 maintaining 159:3 making 51:12 62:14 66:4 93:10 116:18 158:2 201:12,20 202:2 219:13 219:14 232:12,15 234:15 238:23 240:15 240:16,17 244:21,24,25 man 166:10 224:8 management 109:4 manifest 22:20 manner 88:13 226:9 Mantech 70:8 Manufacturing 125:7 mapped 183:13 maps 71:1 Mark 247:7 marked 19:6 51:19 106:23 market 200:16 202:7 242:1 243:12 Markman 1:13,24 7:3 25:4 246:11 247:4 Martemyanov 46:20	massage 123:3 masters 104:22 203:11 231:21 match 27:12 33:13 82:19 96:17 203:2,3 227:11 239:14 243:19,24 244:3 244:3 matched 20:18 27:1 matches 202:24 212:24 matching 15:3 16:16 17:22 19:12 20:2,2,10 20:16 22:11 24:23 25:12 26:3,25 27:5 28:12,14,24 29:20,23 30:20,23 32:21 33:1 34:20 35:2,5 81:16 material 47:3,6 48:7,11 48:12 math 66:13 112:15 121:15 134:20 139:7 174:5,18,25 mathematically 135:15 142:3 mathematicians 137:3 mathematics 169:3 matrices 136:25 137:4 141:24 matrix 118:9,19 137:1,2 137:4 141:11,12,18 177:10,14 194:18 207:14,16,18 matter 1:6 155:6 162:22 165:16 184:9 243:2 matters 49:7 103:14 155:5 170:19 229:6 max 244:10 maximum 244:11 MC 5:12 151:2 157:22 158:14 168:25 169:6 170:2,12 172:15 McDonald's 163:6 MCIF 112:3 122:14 132:1 MCIFH 123:10 124:23 MCIFV 123:9 131:24 McNamara 117:19 McPhail 7:23,23 151:2 mean 27:20 30:16 31:4,8 31:8 32:15 37:11 39:7 40:11 45:1,12 47:19 48:13 50:8 52:24 54:13 56:23 61:10 66:9,21 86:15 87:4,15 96:21,24 104:17 107:13 110:1,11 110:12,15 111:23 118:21 120:12,22 121:22 128:10,10 134:9	136:14 139:7 150:11,22 153:2 154:6 156:19 157:4,5,13 159:13 168:18 177:7 180:18,21 181:7,12 191:12 194:11 195:11 196:19 208:9,14 210:19 218:19,24 241:9 meaning 15:1,5,8,12,19 16:18,21 17:25 18:5,6,9 18:10,12,22 20:23 21:8 22:13 23:20,21 24:1,17 24:19,21 25:6,11,24,24 26:5,6,10 27:8,11 28:7 28:16 29:18,22,25 30:12 31:13 32:7,9,14 34:7 35:9 36:20 38:10 39:9,12 40:15,20 41:3 50:18,19 51:2,10 52:21 56:22,24 57:1 59:3 60:8 61:5 71:18 74:15,18,21 76:1,15 84:5,16,18 85:6 89:7 105:5 107:2,3 109:5 110:1,9 121:3,6 146:15,24 150:21,24 152:5 156:8 157:17 160:12,14 161:10 163:2 163:14 166:23 169:13 176:3 189:9 208:15,17 208:20,21,21 210:8 225:2,5,7 232:20 234:24 meaningful 43:24 178:13 194:3 meaningless 156:3 meanings 35:14 43:7 109:17,18 111:3 127:12 132:14 means 17:10 24:2 31:11 31:15 36:5 41:5,12 42:11 44:13,24,25 56:23 68:22 76:1 91:15 97:2 102:10,12 110:11 111:22,24 112:16,18 118:23 119:16,19 120:3 121:22 123:13 125:9,10 133:2 140:25 144:22 148:12 149:3 152:6,7 153:21 156:19 157:20 158:18 159:14 160:23 166:18 168:4 177:8 180:23 181:2,4 183:14 185:23 186:1 190:25 195:12,14 196:17,23,25 206:20 207:7 208:25 210:7 215:21 228:4,5 236:24 243:6 meant 13:17 25:22 27:18
--	--	--	--

48:14 124:6 160:18 165:14 166:7 167:1 170:21 174:11 199:3 mechanism 75:4,14 media 199:6 204:23 242:20 243:13 Medical 186:3 medium 198:13 Medrad 111:8 meet 22:15 123:25 171:11 194:15 195:5 meet-and-confer 192:23 195:18 meeting 192:21 memories 124:9 memory 95:25 98:4,4,7 98:12 99:3,23,25 113:16,18 148:5 207:17 mention 19:20 47:21,24 68:1 mentioned 9:10 12:21 19:12 43:8 80:16 92:6 195:9 199:5 200:8 202:23 204:20 207:22 207:23 210:2,21 218:2 219:2 231:1 232:6 238:25 241:24 243:1 mere 40:9 160:21 merely 61:21 72:5 merge 8:14 merit 146:18 message 71:20 metadata 209:3,4,13,19 210:6,10,20,23 211:4 211:18 212:8,10,12,21 213:7,23 215:13,15,21 215:25 216:9,11,17,18 216:21,23 217:4,7,12 217:14,19,23 224:4,7 235:9 236:23 237:2,7,8 238:21,22 metes 23:25 method 71:15,17 72:9 90:11,18,18 91:4 92:23 115:19 116:9,9 125:18 203:10 204:21 220:9 231:20 233:20 242:7 methods 9:25 15:21,24 96:15 Mformation 70:14 micro 24:10,18 35:7 74:19 microphone 9:6 Microsoft 127:1 middle 147:19 148:5 177:9 201:11 202:7 204:18 207:1 230:19	233:4 242:1 Mike 13:15 million 10:12 mind 60:20 minor 105:15 144:11 minus 135:10,11,11 minutes 50:1 97:17 197:7 mischaracterized 215:6,7 mischaracterizes 235:12 mischief 191:16 misconceptions 226:2 mismatch 81:17 98:8,20 100:2 116:4 117:24 mismatched 100:5 misstated 28:1 mixed 242:16 mode 14:8,19 16:10 37:14,22 39:19,23 40:12 41:8 47:15 55:24 81:10 model 202:6,18,24 203:2 203:3,15,16,19,24 205:21,25 206:4 208:4 211:21 212:4,12,16,25 213:5,11,16 222:24 223:4,19 226:6,19,20 228:14 231:7 239:13,15 240:17 241:24 242:10 242:11,16,17 243:11,20 243:22 244:1,2,12 model-like 233:23 models 201:13,14,18,22 201:23,25 202:10,12,15 202:21 203:5,8,12,23 204:1,9 206:20,21 211:23 214:20 221:25 223:2,3 224:5 226:3,4 227:3 228:9,11,13 230:7 231:22 232:3 234:20 239:12,12 240:9 240:15,16 241:20,22 242:15 modern 10:6 97:5 modes 37:25 modification 234:11 modified 89:6 230:4 241:1 modifies 77:10 79:1,12 80:7,14 81:13 85:15 87:7,13 88:11 modify 77:3 80:11 85:21 88:14,16 90:6 modifying 84:2 86:16 module 102:20 moment 10:1 31:25 59:20 60:18,23 85:21 86:15 86:19,20 88:10 102:4	161:14 180:8 233:2 moments 26:13 97:17 MONICA 1:3 monitor 198:20 202:17 Monitors 1:9 7:5 247:2 month 196:5 Moore 5:13 7:20,21 23:5 23:7,9,12 30:10,24 31:2 31:20 35:21,22 36:12 40:22 41:1,4,14 47:12 48:11 49:19 56:19 60:22 61:1,8,12,15,18 61:24 62:6 65:15 66:6 moot 167:20,20 168:11 morning 7:10,18,19,20 7:24 8:3 9:1 23:7,8,12 23:13 41:18 76:23 245:14 motion 19:17,18,19,20,24 20:6,12 21:20,23 22:1,2 22:3,7,8 26:17 34:24 52:9 53:11 55:5,13 98:13 99:6,14 100:9,11 100:20 101:4 102:24 103:24,24 104:3 106:15 107:15 108:5 111:13,20 112:5,13 113:4 114:10 114:15,17 115:2,6,10 115:16,18 116:8,9,10 117:2,9 118:12 119:5,7 120:18 121:1,7,18 122:3,8,14 125:17,19 125:23,25 126:4,8,17 127:14,22,24 129:12,14 130:7,12,14,19,24 131:6,16,18,20 132:9 133:4 135:9,16,23 136:7 137:2,15 139:4 141:3,25 143:3 145:3 147:13,23 148:3,9,19 149:4,9 150:9 151:13 196:9 motion-compensate 118:5,18 motion-compensated 81:25 motivates 91:5 motor 45:6,8,10,11,12,14 45:17 motors 45:14 move 10:19 78:7 83:23 84:7 86:4 100:1 172:16 186:10 192:17 208:10 208:25 210:3 221:14 226:14 movement 114:15 movie 200:22,24 201:12	202:3 203:21 207:20 209:17,19,24 219:2,3,3 230:6 240:17 241:4 243:13,15 244:21 movies 10:6 241:5 243:14 moving 75:7,10 96:5,11 99:10 118:11,12 135:11 204:10 212:19 213:22 230:25 Moyer 7:13 MPEG 13:15 16:25 multiple 43:3 72:22 73:11 84:17 126:6 139:12 145:13 149:7 200:2 207:19,20 209:18,23 213:24 214:16 221:24 228:5 230:10,14 231:24 232:16 234:18,19 237:22 241:5 244:21,24 multiplicity 198:2,7 multiply 136:16,17,17,20 137:3 141:16 multiplying 137:1 Multitech 127:2 mutually 110:14 N n 7:1 62:3 126:1 203:11 203:11 206:20,21 207:4 228:12,13 231:21,21 nail 112:25 128:20 218:22 name 68:15 151:2 named 215:18 216:16 narrow 168:19 narrowed 193:1 narrower 75:16 159:17 narrowing 163:3 nature 247:4,13 near 200:17 201:8 nearby 33:17 necessarily 142:23 162:19 165:10 170:14 necessary 64:16 70:15 216:19 232:25 necessity 218:9 need 12:13 19:7 22:23 41:7 47:20 64:24 74:3 102:9 103:17 106:16 143:1 144:22 146:6,22 148:23 151:9 158:24 176:19,20 179:21 181:11,17 183:2 185:7 201:21 233:15 234:13 246:2 needed 95:4 98:3,23,23 128:20 227:4 240:2,11
---	---	---	---

needing 164:19 218:19 needs 42:3 48:15 60:9 95:10 116:14 145:22 149:24 150:2 160:21 191:2 196:8 233:8,18 243:15 neighbor 14:16 neighbor's 39:19 neighboring 16:8,11 29:3 33:6,11 81:25 network 95:16 never 19:12,13 34:21,22 104:12 105:19 108:4 167:8,9 174:1 189:19 190:18,22 new 2:17,17 14:13,18 104:10 105:2 151:24 152:20 179:25 196:2 news 179:3,3 197:12 nice 7:18 117:19 120:23 180:7 NICHOLAS 3:4 Nick 7:12 8:23 9:1 158:15 nick.tsui@alston.com 3:9 night 114:1 195:19 nit 226:20,21 244:10,11 nits 226:18 243:25 244:1 244:9,14 noise 80:3,8 81:9 82:17 83:5 nonconventional 19:22 20:1 nondeterministic 182:23 noninfringement 30:25 nonsensical 51:13 53:24 58:6 61:21 106:3,7 107:25 124:10,10,13,16 nonresponsive 134:18 137:11 nonsuccessively 148:13 148:24 normal 159:16 168:16 169:13 197:4 North 3:16 note 59:21 95:1 noted 42:19 144:8 notes 182:25 247:12,18 notice 1:24 39:5 73:18 112:2 120:13 121:14 notion 104:4 106:12 229:17 230:15,17 noun 108:16 nouns 108:14 November 129:1 130:16 130:16 null 39:15,15 49:12,19 number 8:20 130:17	140:7,13 182:15 206:20 228:12 241:25 numbers 68:9 223:18 numerical 155:13 223:14 numerous 13:15 18:23 35:11,12 NW 2:7 4:15 5:15 6:6 O O 7:1 O2 24:10,18 74:19 110:4 object 69:13,14,23 objected 21:11 24:14 objective 72:24 observed 73:10 obtained 15:2 17:22 24:22 26:3 28:13 29:19 56:11 57:3 60:7,10 62:20 obtaining 29:7 obtains 225:12 obvious 131:14 obviously 25:11 191:4 occur 69:11 70:12 73:3 77:14 78:8 91:13 98:14 148:13,23,24 204:21 occurred 84:3 88:12 222:3 occurring 86:1 93:6,7 occurs 77:4 80:15 86:7,9 87:25 88:8 95:13 224:22 October 20:14 25:21 26:12 73:14 odd 8:20 68:9 192:8 Odyssey 199:4,19 228:17 228:19 offer 25:8 56:21 149:21 186:12 offered 23:18 56:24 158:19 offering 158:19 office 38:12 59:17 131:3 205:7 214:12,13 220:8 236:18 officially 9:21 offline 195:18 offset 227:14 oh 68:8 116:6 126:22 135:10 137:22 okay 30:17 31:19 36:11 36:12 41:11,16 47:10 48:17,19 49:15,21 56:19 61:23 63:1,23 64:5 66:3 68:3 78:18 79:21 86:13,22 89:16 90:9 91:20 92:5,13	93:15 94:4,14,22 97:19 98:21 104:8 105:14 109:2 110:18 111:10 120:12 123:12 131:17 135:2 136:13,14 137:10 137:12,14 138:4,19,25 139:22 140:19 142:5,14 143:12 147:2 148:8,21 150:1,25 152:16 155:18 158:13 165:21 173:25 178:16 180:10,14 189:21 190:10 192:6,10 194:8 195:6 197:23 198:25 202:9 228:2 237:9 239:19 243:12 245:7,17 old 42:5 173:3 194:13 once 38:20 67:13 87:19 106:11 137:5 139:14 202:20 245:23 one-quarter 140:8 one-to-one 206:23 ones 9:23,25 10:4,13 107:21,22 135:19 154:21 onset 59:21 opening 47:2 147:17 149:12 211:2 235:12 operate 141:17 operates 72:2 83:9 100:11 147:23 operating 72:17 116:17 operation 69:4,5 70:1,16 70:19,22,24 71:8,21,24 72:4,13 75:16 76:6 83:25 86:2 87:12 88:7 102:6,7 104:14 105:3 105:19 107:7 108:22 111:6 112:19 118:19 119:5 120:4 121:9 122:3,4 123:13,20 125:2,11,15 127:18 133:6 134:8,10,14,18 134:24 135:9,22 136:4 136:5,9,12 138:6,9 139:11,24 140:1,22 141:2,9 143:10 144:9 144:13 145:8,16 147:21 149:6 operations 75:1 80:11 88:13 100:24,25 101:2 102:15 107:5 108:5,13 110:2,6 111:14 112:5 112:24 119:10 120:3,7 121:13 123:17 125:14 125:22 126:16 128:19 132:13 134:15 135:14	138:21 139:12 141:10 144:25 145:15,17 146:2 147:13 148:11,13,18,22 149:4,9,20,25 150:3,8 150:17 181:9 operatively 67:9,11 opinions 149:21 opposed 20:23 22:8 78:20 153:3,15 168:11 177:4 209:3,4 237:16 244:11 opposing 23:14 108:4 109:22 111:11 113:10 114:10 119:2 128:4 129:3 150:7 171:16 opposite 120:23 162:23 166:24 optimal 81:18 182:19 optimized 164:8 option 73:3 optional 243:2,6 orange 53:19 order 8:17,19 9:21 69:3 69:11 70:12,17 71:7,20 76:6 84:19 85:20 145:22 153:17 154:18 154:24 155:1,2,3,5,12 155:17,23,24,25 156:2 156:6,10,12,14,19,21 157:1,4,5,14,14,25 158:9,20 161:19,20 169:16,24 170:5,23,25 171:2,7,9,23 191:23 ordered 25:1 ordering 69:21 90:21,25 91:8 ordinary 13:16 16:18,20 17:9,25 18:5,22 21:7 22:23 23:20,21,24 24:1 24:16,21 25:6,11,23 26:5,6,7,10 27:7 28:16 29:18 30:11,12 32:7,9 32:13 34:6 35:9 36:20 39:7,9 40:14 42:15 50:19 56:22,24 57:1 60:8 64:14 89:7 105:4 107:2,3 109:5,17,17,18 110:9 123:14 124:5 131:14 133:1 150:21 152:5 156:8 157:17 176:3 208:15 217:13 225:2,4,7 232:20 234:24 original 9:22 10:5 128:23 140:7 141:3 198:13 originally 162:11 173:10 174:11 192:23 output 51:21 52:10 53:18
---	--	---	---

53:20,23 54:9,25 55:16 55:25 58:4,12,12,22 63:4,13 64:22 65:4,17 66:10 80:23 131:5 135:17 141:25 183:13 198:13 212:3 outputs 53:8,13 55:14 65:3 67:17 80:18 outputting 67:10,12 81:3 outside 181:15 overall 14:17 127:4 overcame 131:22 overcome 56:13 overcoming 29:16 overcomplicate 168:19 override 40:7 overview 9:11 197:16 Ozcelik 21:19 22:7 Ozcelik's 21:25 P p 7:1 33:10 p.m 133:15,16 134:1 246:11 Pacific 27:25 28:2 packet 233:16,19,19 packetizing 233:6 page 28:2,9 131:3 147:17 149:12 177:24 191:13 191:18 209:10 211:3,3 220:8 235:13,14 pages 28:5 218:7 pairs 39:14 Palo 5:7 paragraph 19:5 92:12 112:11,12 182:21 216:8 217:9,22 240:4 parallel 110:12 parameter 68:23,25 69:6 70:22 71:4,9,11,22,23 72:3,7,9,25 73:3,16,22 74:16 75:3,5,6,9,12,15 75:17,17 76:1,4,14 77:3 77:7,9,11,19 78:4,14,16 78:25 79:6,11,12 81:10 83:16 84:14 85:12,14 85:18,20,20 86:11,18 87:10,19 88:15,16 89:18,22 90:4,7 91:24 92:9,23 93:10 184:25 185:1 188:5 209:12 210:21 211:6,10,11,14 211:22,23 212:4,12,16 243:24 244:4 parameters 72:5,11 80:12 81:12,15 83:8 93:7 94:9 175:14,15,21	175:21 176:7,7,12,25 177:9,12,25 178:21 179:6,13,16 180:19 181:8,10,17 183:6,9,10 183:11,12,17,18,19,20 183:21,23,24 184:2,5,7 184:8,15,18,20,23 185:7 186:13,23,23,23 186:24,24 187:1,1,2,6,6 187:7,18,19,21,23,25 187:25 188:1,2,3,17,18 188:23 189:4,7,8,10,13 189:15 190:2,3 191:19 191:23 206:3,4 243:23 243:24 244:3 parameters/second 184:7 parent 221:11 parenthetical 112:18 121:20,20 160:17,22 164:18 Park 2:16 parlance 160:7 parsing 193:12 part 21:14 40:23 57:13 63:25 64:5,7 87:22 90:4 92:3 93:5,11,12 108:21 111:15,25 118:13 131:25 143:7,22 152:14 158:1 160:18 164:14 168:1 170:20 173:19 174:7 193:6,21 196:24 220:15 238:9,12,13 participle 72:2 particular 12:7,12 24:16 52:21 71:3 102:21 108:25 149:13,19 151:22 152:13,14 153:6 154:19 157:9 162:18 164:9 241:19 particularly 154:20 155:19 215:16 233:5 particulars 149:23 parties 7:8 8:16 9:14 14:25 24:11 25:3 50:5 68:21 74:14 102:10 156:9 172:12 191:12 192:21 parties' 25:5 35:18 partition 10:21,24 11:9 28:22 partitioning 25:25 167:12 168:7,10 partitions 28:20 parts 10:22,23 11:16,17 60:15 80:4 92:6 127:1 142:16 party 128:15 194:2	pass 56:15 102:19 149:14 passage 16:12 39:11,12 39:19 89:24 228:21 241:4,6 passages 28:25 39:22 passed 9:3 137:18 196:1 passing 138:18,22 195:19 patent 9:16,17,18 13:12 14:2,4,11,21 15:19,22 16:5,9,14,22 17:17 21:12 23:14 26:7 29:7 31:3,6 35:23 39:15 42:9 49:11 51:23 60:17 61:1 61:19 68:20 69:10 70:21 72:1,24 81:7,14 81:20,21 82:4,10 89:17 90:3 94:1,22,22,25 95:3 95:12 96:7,13 98:10,25 99:5,13,18,21 100:2,17 100:24 101:14 108:8,23 108:24 114:19,20 119:3 119:6,16,24 121:24 122:13 126:20 127:7 133:2 135:7 137:9,23 139:3 144:21 148:1 151:8,12,20,25 152:13 152:18 153:4 154:11 164:12 165:23,25 172:17 173:13,14 180:15 181:22,23 182:16,22,25 183:1,4,5 184:1,9,12,13,24 185:5 186:21,22 188:25 192:17 197:3,13,13,14 197:17,18 198:1,3,4,9 198:10 200:7,13,14 201:8,10,16,24 202:1,8 202:9,15,25 203:1,5,9 203:18,20,25 204:2,6 204:12,15,19,20 205:23 205:24 206:9 207:1,8 207:15,25 208:20 213:25 214:25,25 215:18 216:16 218:15 219:12 220:13 221:10 221:11,11,23 222:6,6 224:10,10,17,23 226:3 226:23 227:1,7,12 228:1,20,23 229:2,17 229:24 230:13,15,23 232:14 233:3,4,5 234:2 236:22,24 239:3,3,25 242:1 245:13 patent's 40:4 patented 148:1 patentee 28:15 104:21 119:23 124:11 142:17	161:6 177:24 224:18 229:10 232:15 233:1 234:4,15,21 235:4,8,16 236:16,19 patentee's 18:4 236:22 patents 9:11,15,20 24:4 126:22 142:24 172:19 172:21 173:11 175:5 180:14 221:10 235:2 paths 217:6 patience 238:5 pattern 83:2 91:2 Paul 4:12 7:25 paul.goulet@fisherbro... 4:18 pause 119:19 175:1 PC 5:14 PCT 130:6 197:19 Peachtree 3:6 pending 236:4,6,17 people 13:15 126:22 215:12 238:20 people's 182:7 perceptive 144:23 perfectly 243:24 244:4 perform 69:15 72:12 100:19 111:13 113:24 117:2 145:3 147:13 150:2 182:19 184:12,15 185:8 performance 113:4 128:25 performed 69:6 70:1 71:9 71:21 101:5 111:14 125:14,24 126:17 128:2 130:7,10,11,12,19 145:18 149:10 201:23 203:7 230:3 240:25 241:17 performing 83:15 85:11 91:23 112:24 121:13 131:19 133:4 135:23 149:8 performs 54:22 119:10 130:12,14 144:25 148:3 Permission 180:11 197:9 permit 148:22 permits 59:12 person 26:7 30:11,15 31:12,17 39:7 42:12,15 49:4 50:19 51:14 93:14 112:16 123:14 197:21 201:20 247:3 person's 184:10 persons 17:9 22:22 perspective 144:10,16 146:6 192:8
---	---	--	--

persuasive 32:18 124:3 petition 102:9 151:13,14 151:24,24 PHAIL 5:12 151:2 157:22 158:14 168:25 169:6 170:2,12 172:15 phil.ducker@alston.com 4:9 PHILIP 4:4 Phillip 7:12 41:18 Phillips 85:4 110:15 111:7 125:5 225:24 Philly 199:16 phrase 57:10 62:4 86:9 105:18 106:25 107:14 107:21 128:22 130:18 phrases 104:12 144:4 physical 102:19 153:16 pick 223:4 228:18 234:10 244:2 picked 36:1 194:1 picking 223:18 picture 10:5,20 11:9 15:2 15:3 16:3,17 17:22,23 20:3,18,19 24:22,23 25:13 26:1,3,4 27:2,3,5 28:13,14,24 29:19,21 29:23 33:8 35:5 36:7 80:20,25 95:25 96:19 96:23 97:15 98:6,20,21 99:11,23 100:4,11,22 114:12 147:23 183:15 188:9 202:13 204:14 206:1,7,10,14,14,17,18 206:19,22,24,25 207:3 207:3,4,8,10,10,11,19 207:22,24 208:1,1,3,6 208:11,12,14 209:3,8 209:11,18 210:5,7,11 210:13,13,15,22,24 211:5,7,10,13,17 212:1 212:2,7,9,13,16,20 213:2,5,7,9,14,19,21,23 214:10,16,18 215:1 218:4,13,19,20,20,23 222:13 223:6,7,11,22 223:24 224:14,21,24 225:9,11,12,12,13,14 225:15,17 226:25 227:1 227:5 228:4,5,6,7,8,9 228:13,24,25 229:4,8,8 229:11 233:11 234:7,19 234:24 235:9 236:1,3,8 236:11,12,24 237:3,5,7 237:15,16,20 239:4 240:12,12 243:3,4,6,17 243:17 244:18,19	pictured 153:7 pictures 81:25 piece 26:20 pieces 221:12 235:6 pipe 230:19 pixel 12:5,12 13:3,5 16:6 16:8 17:21 22:2,2,8 67:4 80:15 81:13 83:5 85:16 86:20 87:8 88:11 88:16 90:7 136:2 209:9 212:10 222:16,16 223:17 225:22 237:8,16 237:22 244:13 pixels 10:12 11:5 12:7,8 12:15,15,22,23,24 28:21 33:6,7,11,16,17 77:11 78:17 79:2,12 80:7 84:2 85:21 86:16 86:17,19 87:14 95:18 95:20 101:7 153:17 217:5,11 237:2,5 place 56:9 162:7 174:20 189:20 191:2 205:1 223:10 243:9 places 57:11 115:14 161:5 222:7 224:22 plain 14:25 15:5,8,12,18 16:18,20 17:25 20:23 22:13 23:19,20 24:1,16 24:21 25:6,11,23 26:5,6 26:10 27:7 28:15 29:18 30:12 32:7,9,13 35:8,14 36:20 39:9 40:14 50:18 56:22,24 57:1 60:8 64:14 74:14,18,21 76:1 76:15 84:5,16,18 89:7 105:4,9 107:2,3 109:5 152:5 156:8 157:16 159:12 160:5,12,13 168:17,22 176:3 183:14 184:16 189:2 198:14 200:25 208:15,17,20 210:8,8,24 225:1,4,6 232:20 234:23 241:7 play 123:7 171:7,8,10 200:4 205:22 207:21 243:16 played 173:2,3 202:22 plays 171:6 please 7:8 9:9 50:3 65:13 66:25 76:24 92:19 165:23 166:9 167:25 190:11 196:8 197:10 221:4 245:25 pleased 192:22 plug 123:15 198:24 plurality 26:2 204:8,14	208:12,13,25 209:18 210:2,12 211:25 214:20 224:21,23 225:9,12,13 225:16 227:2 234:19,24 235:25 236:3,7,11,12 236:23 237:20 240:9 241:19 243:16 plus 46:12 135:21,21 136:1,4,5,5,11,11,11 141:8 223:20,21,22 podium 23:3 point 20:21 35:3 36:7 45:3 48:9,10 52:25 56:23 69:16 71:6,7 75:4 75:15 78:15,15 80:8,14 83:8 88:16,25 89:1,2 92:15 94:7,24 102:4 108:10 112:9 122:5 123:21 124:8 127:2 137:11 141:2 145:12 153:23 155:19 166:12 167:16 172:19 173:18 175:24 184:4 190:2,6 191:6 211:4 214:4 218:22 219:12 220:19 221:20 222:25 223:1 231:17 236:25 238:6,14 238:18,23,23 239:10 242:22,23 244:17 245:20 pointed 92:21 112:1,15 114:10,19,19 121:10 122:6,20 124:13 127:4 128:4,9 132:17 143:20 143:24 144:6 167:3 240:22 pointer 44:1 179:6 pointing 58:1 142:16 144:3 151:5 188:11 points 16:23 62:10 65:12 122:7 123:8 136:20 143:18 168:25 187:17 187:19,23 227:23 polygon 169:3 polygons 169:20 portion 103:20,21 142:7 142:11 167:4 228:23 237:2 245:11 portions 229:25 POSITA 169:11 position 11:23 36:19 47:5 61:10 62:5 95:9 105:13 146:20 151:17,18,22 152:5 158:22,22 162:21 163:25 166:12 169:8 172:1 178:1 185:18 189:18 192:1,5 234:22	possibility 201:19 possible 10:9 39:12 132:14 139:9 140:16 141:21,22 142:3 150:23 172:8,23 173:8 188:20 201:5,7,12 202:3 242:3 possibly 174:14 194:14 post-production 203:6 220:11,12,12,14 potential 190:22 191:15 202:7 potentially 139:8 172:13 power 45:7,18 227:15 practical 178:9 193:22 practice 149:2 preamble 67:1 206:15 225:10 preceded 122:21 precise 25:9 precision 139:16 preclude 148:9 predicate 70:16 predict 12:14 13:6 33:6,9 33:17 114:11 116:7 118:6 134:25 135:5 198:11 predicted 15:20,24 16:7 predicting 12:22 prediction 12:17,18,19 13:9,10,11,21,21 14:6 14:11,11,18,22,23 15:2 15:6,19,20,22,24,24 16:2,6,10,12,15,23 17:2 17:15,16,16,20 18:18 18:19 19:21 20:3,6,7,9 20:11,19,20 21:23 22:5 22:5,6,9,10,22 24:21,22 25:10,12,16,17,17,18 25:21,25 26:2,18 27:2,4 27:19 28:13,25 29:2,19 29:25 30:5,9,19 33:4 34:21 35:4 36:17,18,21 36:21,22,23,25,25 37:1 37:2,5,6,6,11,15,19 38:3,6,7,7,8,23,23,24 38:25 39:15,16,16,21 40:13,14,15,16,17,18 41:7,24 42:2,4,16,19,23 42:23,24 43:9,10,11,11 43:13,15,17 44:17,18 44:19,19 45:21,25 46:6 46:19,22 47:8 48:16,25 48:25 49:2,3,7,12,20 52:9,9,10 53:5,7,8,11 53:13,14,17,17 54:2,4,4 54:18,19 55:3,6,12,12 55:13,14,15,17 56:11
---	---	--	--

56:12,12 57:3,4 58:9,13 58:15,18,18,21,21,24 59:13,13,13,15,19,24 59:24 60:3,3,4,11,12,14 62:20,21,21 63:10,11 63:24,24 64:2,3,4,4,21 64:21 66:10 67:8,10,11 67:12 82:1 101:5 115:23 116:19 118:20 137:13 157:3 predictions 13:13 14:9 25:14 27:13 37:17,20 37:20,24 38:15,16 39:17 44:17 46:11 48:23 55:8 58:10 60:6 63:12,13 66:2,19,20 81:1 predictive 14:7 predicts 118:7 predominantly 23:13 36:15 preferred 16:19 22:14 32:11,16 33:16,21 36:3 44:11 46:8 51:22 53:3 103:12 114:25 115:20 126:23 127:3 163:15 168:20 227:25 preliminary 130:9 premise 84:11 188:25 prepared 48:9 247:18 preprocess 219:3 present 24:11 127:8 201:17 223:8 227:5 228:4 230:1 235:23 240:11,24 presentation 42:18 68:17 77:6 91:10 109:22 117:21 134:13 142:6 144:19 146:5,11 221:16 229:21 231:19 presentations 245:23 presenting 106:22 preservation 59:9 preserved 215:21 preserves 38:19 presumed 51:2,3 presumption 43:5 pretty 97:18 117:23 123:20 133:2 142:17 144:21 166:25 175:9 226:18 prevent 188:13 previous 36:13 previously 21:1 59:22 135:7 158:18 primary 41:6 74:5 230:2 230:11 240:24 241:11	241:14,18 principal 70:14 prior 19:13,16 20:11 22:7 27:11,18 28:6 29:11,16 31:15 34:22 36:5 46:17 46:19,23 56:13 70:13 73:17 81:14 96:15 97:22 98:7,22 100:8 113:24 129:25 131:23 133:8 135:19 146:19 147:20,21,24 163:25 164:2 167:13 215:3,11 217:1 238:8 priority 128:24 130:6 197:19 Prius 45:5 probably 52:17 108:15 113:1 170:3 222:19 problem 13:19 23:11 47:7 66:1 95:13 96:13 98:10 100:7 104:10,19 105:21 160:4,4 169:9 171:24 173:14 174:11 181:24 182:6 183:5 185:21 200:13,15 201:3 201:11,21 224:18 problems 65:16 66:6 78:11 81:15 104:10 proceed 9:3,8 65:13 109:2 196:4 197:5,9 221:3 proceeding 26:16 proceeding(s) 247:6 proceedings 247:10,15 247:17,19,20 process 10:7 23:17,22 25:4 29:7,9 31:6 33:13 62:1 66:12,19,20 69:1 71:12 72:17,19,21,24 73:4,6 74:17 78:9,21 79:10 80:2 83:24 87:19 87:21 89:4,8 90:5,18 91:25 92:1,3,25,25 93:1 93:4,5,11,13 100:8 152:15 153:19 182:2,24 192:23 193:2 195:23 201:22 203:4,18 205:25 212:24 214:9,16 217:10 217:23,24 218:16 220:13,15 225:9 232:2 234:6,18 241:15,16,17 processed 218:23 219:5 processes 53:25 63:8 93:2 205:1 214:17 217:21 processing 61:18 67:16 80:10 82:14 87:11 91:15 117:13 207:5,7	207:23 218:5,5,9 219:1 229:1,3,12 242:23 243:9,18 244:7,10,16 244:23 processor 149:14 produce 65:19 200:17 produced 19:18 69:24 199:10 producers 199:6,19 produces 65:23 product 80:23 production 17:10 130:17 products 200:10 professional 182:4 198:18 201:18 205:7 proficient 154:13 projection 200:12 projector 97:12 239:22 proof 201:19,19 242:13 proofread 247:10 Proofreader 247:16 proper 237:9 properly 16:18 35:17 172:23 property 10:16 proposal 16:15 74:18 76:15 107:5 109:5,9 122:16 123:12 126:18 170:11 propose 62:23 104:20 208:15 proposed 17:12 23:18 24:15,24 27:10 30:6,20 35:16 38:19 40:3 43:21 62:17 63:25 64:12 75:25 78:1,3 84:4 101:20 105:14 106:1,6 125:3 152:8 153:14 proposing 30:22 109:12 185:6 prosecution 15:10 17:14 17:14 19:8,9 21:16 27:9 27:14,22 29:1 33:24,25 34:19 40:17 44:12 56:5 56:13 69:7 73:20,23,25 74:3,8 76:12 84:23 109:25 113:2 119:17,24 128:21 130:3 146:12,23 163:21,23 164:13 167:2 167:4 168:14 213:22 214:1,5 217:2 219:11 222:4 232:7,21,23 234:4,16,22 235:13,17 235:25 238:12 proves 211:3 214:4 provide 14:13 18:18 52:20 67:3 85:6 140:23	177:8 195:3 201:23 208:20 236:15 provided 24:15 25:24 186:18 206:22 provides 56:5 206:19 228:8 providing 181:9 198:1 provision 216:6 provisional 215:20 proximity 161:9 PTO 132:4,17 publication 216:4,5,7,9 216:15 Pujols 110:21,24 111:1 119:13 pull 147:15 196:22 239:5 punctuation 247:13 punished 122:17 Pure 153:24 purple 121:15 purport 183:4 purported 181:24 purpose 109:24 111:10 111:11,12 112:20 113:9 113:18 118:21 119:1,7 133:2 166:22 169:15 184:6 185:5 191:10 198:10 purposes 90:13 244:23 pursuant 1:24 put 32:10 34:15 64:24 67:14,15,15 79:17 101:8 103:19 104:24 123:17,19 149:11 157:2 179:17 184:16 187:4 194:12,14 198:14 200:25 202:20 218:21 219:25 222:9 puts 201:8 putting 78:6 80:24 149:23 186:19 243:8
Q			
qualify 212:12 quality 182:9 200:5 233:12,14,15,18 quantization 66:15 81:10 81:23 82:12 139:16 140:12 175:7 quarter 140:7 question 35:10 40:20 47:1 48:7 59:7 62:9,12 71:11 74:19 86:14 138:5 142:25 143:19 144:1 156:11 158:3 167:21 168:5,13,13 190:12 191:25 222:19			

237:13 questions 23:2,4 30:3 31:25 32:4 46:25 56:15 56:17 60:19 65:12 76:18 89:11 106:18,19 133:10,12 134:3,5 143:17 146:9 157:18 180:1 192:12,13 194:6 220:24,25 223:10,11 237:12 quibble 123:2 quick 31:25 48:18 179:5 238:4 quickly 84:7 154:10 171:14 180:17 181:20 181:22 229:20 240:7 Quinn 6:5 8:4 197:11 quite 32:3 46:17 154:5,12 169:6 192:7 235:9 quote 132:10,18 147:16 231:17,23 235:18 quoted 235:20 quotes 114:24 145:16 R R 5:12 7:1 raised 28:18 90:10,17 242:24 raising 189:17 191:7 ran 190:21 random 194:25 range 174:19 182:7 200:10 243:12 rarely 32:19 46:9 rate 95:17,19 97:3,13,16 97:19 ratio 199:12 226:8 raw 66:12 RDX-M4.15 89:1 RDX-M5 106:23 RDX-M5.1 106:24 RDX-M5.17 145:13 RDX-M5.21 128:22 RDX-M5.24 130:16 re-bring 162:8 re-undo 66:18 reaches 58:8 read 16:19 19:15 21:15 21:16 26:7 28:3 30:13 30:16 32:12,16 33:21 39:8 46:13 74:5 85:16 93:15 101:20,23 103:3 103:11 106:5 108:23 109:18 111:9 133:1 144:12,21 146:17 159:18 170:13 176:19 179:15 186:13 206:18	221:13 235:15 240:8 245:12 readily 26:16 105:9 reading 36:2,8 58:24 73:24 74:9 79:4 125:8,9 143:25 236:21 reads 35:16 44:11 103:12 152:23 163:20 ready 49:21 68:4,6 151:1 218:10 real 5:6 24:19 42:14 107:13 108:3 109:15 110:5 153:2 Realistically 29:13 reality 88:10 208:9 realizes 174:2 really 26:15 31:13 42:5 42:20 43:12 47:17 50:6 63:12 87:6,7 103:14 128:14 138:1 144:1,11 154:10 160:18 168:17 176:5 179:16,18 180:15 180:16 199:3 210:1 218:22 222:21 229:13 229:19 230:15,18,18 rear 45:11 reason 60:2 73:19 77:17 80:21 84:18 88:6 98:5 102:2 118:3 136:3 145:3 149:16 153:3 159:23 160:7,25 162:12 168:18,21 179:16 184:8 193:16 218:14 232:19 243:19 244:16 reasoning 151:21 reasons 40:5 41:6 43:3 48:4 104:15 132:16 176:5 rebuttal 31:22 77:5 191:18 192:16 215:5 218:1,7 219:6 229:21 245:5 rec 188:4,6 recap 180:17 receipt 69:19 receive 12:14 214:9,16 233:22 234:6,18 received 63:7 receives 55:21 57:6,25 67:19 233:7 receiving 69:12 232:17 Recess 50:2 197:8 recessed 133:15 recite 91:21 105:24 219:14 recited 26:19 27:13 38:8 39:1 60:5 71:18 78:8	232:11 recites 26:24 208:11 210:12 216:18 recognize 14:5 22:23 34:2 recognized 13:16 17:3 74:6 145:14 recognizes 75:2 reconstruct 98:6,15 reconstructed 67:3 95:23 95:23 98:11,15 99:7 103:25 113:17 reconstruction 96:6 99:2 99:15 reconstructions 81:1 reconstrue 106:16 reconvened 133:16 record 29:25 30:15 39:3 40:3,17 87:23 89:9 94:13 104:13,17 105:17 105:20 110:22,23 144:4 144:7 178:3,6 191:22 193:25 195:20 238:10 238:13 246:1 247:6 recording 247:19 recordings 247:12 rectangle 11:1 153:2,8,9 153:16,24 154:16 155:7 155:8 158:4,4,5,10 170:19 rectangles 169:20 rectangular 28:20 162:16 red 11:15 12:11,16 16:23 51:19 53:22 65:2,4,4 87:20 88:9 89:2 118:15 223:17,20 redefine 18:16,21 20:23 34:4 72:21 redefining 21:2 74:24 reduce 80:7 82:11,12 135:8 redundancies 11:12,25 redundancy 11:10,14,17 11:19,19,24,24 12:1,2 12:18,20,21,22 13:10 33:5 redundant 44:6 refer 93:3 112:4 115:13 179:7 reference 19:25 20:18 27:1 80:25 81:24,24 95:23,24 96:3,4,8,10,14 96:16 99:1,7,11 100:3 100:10 101:3,4,7,15,23 103:6,24,25 106:9 113:15,17 115:11,25 116:2,4,13 117:7,25	118:17 126:9 131:15 135:3,8,14 147:22 151:7 182:1 214:7 217:1 227:6,19 232:24 240:13,18 referenced 80:20 references 36:6 59:25 221:7 232:22 235:1,5 238:12,15,18,20,23 referred 13:14 30:4 70:12 92:22 169:3 referring 18:10 86:15,21 93:24 209:4,13 239:7 239:21 241:23,23 242:18 refers 39:13 62:4 69:10 84:14 88:17 107:21,22 154:15 200:21 240:2 reflected 69:19 reflective 151:19 reflects 94:18 regard 48:13 regarding 24:12 68:20 147:2 205:5 235:5 regardless 124:6 161:16 161:17,22 regenerating 21:20 22:1 Reggie 110:19 region 68:25 69:1,7 70:7 70:23,23 71:5,10,22 72:7,19 73:10,23 74:16 75:6,9,13,18 76:1,2,3,5 77:9 78:5,15 83:15,17 83:18,22 84:9,9 85:12 85:12 91:23,25 region-based 68:22 71:22 72:9 73:15 75:3,5,15 78:4,14 83:16 86:11,18 91:24 92:23 93:10 regular 199:16 regulate 73:2 reinforces 76:10 reiterate 188:15 238:14 reject 89:10 245:15 rejected 22:13 35:18 43:3 44:8 106:2 129:10 159:24 160:20,24 162:11,14 163:20 rejection 113:3 129:15 131:10,21 rejections 167:20 168:11 rejects 210:25 relate 137:11 181:11 185:9 187:2,8,10,12,13 187:21 188:19 196:23 related 23:16 31:8 73:2 220:9 221:11 235:2,22
--	---	--	---

relates 122:18 181:2,5 188:7 189:25 207:23 216:5 243:11 relation 186:5,7 194:10 194:20 196:20 relationship 52:4 71:19 72:3,16 73:22 74:23 75:19 76:13 102:15 131:8 170:15 194:25 relative 162:21 relevant 31:13,14 72:18 197:20 220:20,21 relied 132:7,22 relies 131:3 rely 19:11 21:14 29:2 73:16,21 109:21 169:16 remain 59:4,10 100:9 102:24 remains 59:7 71:12 remarks 132:8 remember 26:5 57:16 58:10 61:9 89:25 109:3 113:12 116:8 142:10,11 142:13 186:22 remove 37:25 80:3,7 removes 99:22 render 172:23 223:7,23 225:19,21 renderable 209:23 218:13,25 219:4 225:22 229:12 243:7 rendered 209:5 210:18 215:14 216:3,25,25 217:15 218:10 222:14 222:15,17 243:5 rendering 182:6,17 184:9 renders 106:2 124:15 223:21 repeat 32:23 repeated 29:23 115:12 repeatedly 15:11 21:11 220:17 repeating 12:5 rephrasing 105:7 replace 42:22 44:3 45:16 replying 129:19 report 192:22 reported 247:17 Reporter 247:1,10,21 Reporter's 247:11 represent 68:16 151:3 176:7,12,15,25 177:4 177:12,16,21 178:22 180:19,21,23 181:2 185:18,23 186:1,4,7 193:22 194:9 196:11,16 196:17,20,23,25 201:25	208:3 representation 56:10 57:2,24 60:10,13 62:1 62:19 63:3,9,22 64:6 169:24 176:15 195:4 representative 8:5 185:12 242:12 247:8 represented 27:22 203:12 231:21 representing 227:3 240:1 240:10 242:8 represents 188:11 reproduced 26:24 reproduction 9:13 request 44:5 69:12,20 71:1 75:24 requested 24:20 29:17 40:13 69:14,17 71:2 require 24:25 35:8,15 56:2 61:19 69:12,13 72:5 73:9,15 78:23 79:18 84:8 85:1 91:7 93:17 102:18 104:5 118:24 119:14 138:9 149:13 189:14 232:5 required 13:22 35:19 69:21 70:5,8 71:3 96:15 98:7 131:11,11,12 151:16,17 161:21 182:19 192:24 193:19 requirement 29:23 43:14 74:4,11 75:12 77:13,14 77:19 78:19 79:9,11,14 79:15,18 99:22 129:7 179:10,20 211:18,20 212:3 213:12 222:3 232:7,17 requires 15:13 18:3 19:22 22:16 24:18 26:6 34:6 35:7 37:3 40:1 70:16 72:6 74:2,19 76:4 76:16 86:10 90:21 103:23 117:1 138:15 147:9 193:11,17 194:23 209:23 210:18 requiring 86:1 reread 234:4 res 182:5 resample 99:13 131:1 resampled 96:16,17 97:23,25 98:12 99:22 100:10,21 113:15 129:8 131:12 147:22 148:4 resamples 99:6 126:4 resampling 98:13 99:24 100:8,19 101:1 102:24 104:3 106:15 113:14,20	115:7,7,17 117:2 119:5 120:19 121:7 129:11,13 130:2,8,13,14,19 131:4 131:16,18 132:9,20 145:3 147:13 148:3,10 148:19 149:4,9 resized 96:16,17 97:23 98:3,9,12,24 99:22 resizes 99:6 126:4 resizing 99:3 101:1 resolution 25:3 95:14,14 95:18,20 97:2,6,7,14 98:1,19 99:12 114:3,8 135:4 226:8 resolve 24:13 25:7 35:7 74:12,19 76:16 159:2 172:13 resolved 35:11,18 210:4 resolves 68:24 resolving 25:5 respect 15:18 27:17 48:6 50:25 86:3 90:10 143:19 170:9 208:22 221:7 235:25 236:11,17 respectfully 60:1 75:24 respective 102:6 104:13 105:3 106:10 107:6,8 107:20 120:7 122:18,19 122:24 123:3,18 124:6 130:2,3,11 132:20,23 134:7 202:12 203:12 231:22 respectively 38:4 120:10 respects 103:19 respond 47:12 66:3 94:6 237:18 respondent 4:11 5:3,11 36:19 52:22 144:14 respondent's 85:13 Respondents 8:1,21,25 15:1,8 18:1 19:11 20:4 20:20 21:14 24:15 25:8 32:6 33:20 34:23 35:3 38:21 41:22 42:21 43:25 44:2,5,12 46:15 47:7 50:10 56:16,25 62:18 64:1 67:18 68:16 71:25 74:2 75:22 77:1 77:18 79:14 83:20 87:18 88:5 91:14 92:21 93:7,18 95:9 100:6 102:23 104:20 105:13 106:11,18 145:2,14,21 147:20 149:11 151:3 159:15 160:9 161:15 164:15,18,21,25 166:16 167:3 177:23 178:2,12	179:17 180:21 185:6 186:12,17 191:4 195:9 195:10 208:17 209:22 219:8 229:14 246:7 Respondents' 15:7,16 16:15 17:12,19,23 19:5 20:5 22:12 29:5 42:4 43:21 44:6,10 46:13 51:9,12 53:21 56:4,9 62:5 65:1 68:24 71:13 74:22 88:25 90:17 91:6 93:22 101:20 104:4,8 105:1,18 106:1,5 144:3 144:18 146:5,11 147:17 158:17 160:21 161:12 161:23 162:2,10,13 163:1,19,22 164:14 166:11 172:3 178:1 210:17 237:1,14 Respondents/Intervenor 215:6 response 20:14,15 21:19 25:20 26:12 27:16 29:24 38:13 59:17 65:13 75:21 130:16 131:23 167:7,11 168:6 214:13,14 responsive 236:19 rest 17:20 24:24 26:6 75:19 242:22 restart 180:9 restrict 89:7 restricted 195:24 245:11 restriction 21:10 22:21 222:3 232:7 rests 29:5 result 69:23 70:10,13,19 70:20 115:22 136:1,21 137:18 138:18 140:3,5 140:11 213:19 resulting 19:17 39:20 44:20 57:22 58:12 168:6 results 80:3 140:17 retain 39:22 retracting 77:6 Returning 35:3 reuse 12:8 reusing 12:15 reverse 54:3 98:18 reversed 45:23 revisit 47:20 rewrite 42:21 159:16 rewrites 161:2 rewriting 161:4 164:11 rewritten 44:5 right 9:15 11:20 14:15
---	---	--	--

16:1,13,22 17:19 30:13 31:5,16 40:24 41:16 45:19 49:5 52:18 61:4 61:17 62:6,8 64:9 65:6 66:22 68:11 82:20 83:1 83:4 86:8 92:16 94:2 95:21 96:3,12 100:13 106:4 109:15 110:8 113:9 114:18 115:22,25 116:3,4 117:16,20 118:4,11 119:25 121:8 121:12,21 122:2,5 123:1,6,7 124:20 125:12 128:23 129:4 130:15 131:13,21 132:3 132:12 134:23 135:4,11 136:12,25 137:18,25 139:6,19,22 140:14,19 143:15,16 148:19 149:6 149:25 153:19,21 154:1 154:5,11,13,14,15 155:16,25 156:3,20,24 165:1 169:5,13,19 170:8,20,24 173:14,18 178:5 179:11,20 183:12 185:24 188:13 190:3,4 190:10 192:3 194:19 195:16 197:1 204:11,11 224:6 229:22 230:22 231:18 233:12,21 239:22 241:13 242:5 244:17 right-hand 127:20 ringing 82:9,20,22 rise 34:12 82:1 161:9 road 178:11 193:9 194:21 Robertson 113:3,6 129:11,12 131:3,16,18 132:5,8 146:12 Robertson's 129:11,18 129:22 role 171:6,7,8,10 roughly 241:25 route 184:18,20 routine 72:23 routines 72:22 row 7:17 rows 116:17 rule 69:22 71:20 72:1 150:23 rules 24:25 run 190:17,22 193:6 runs 110:19,23 Ruth 110:18,24,25 119:13	S 7:1 S.W 1:17 Sadly 154:12 SafeT 125:7 sake 145:11 186:9 same-picture 27:12 sample 17:6 118:10 samples 16:2,11 17:5 167:12,14 168:10 sampling 107:16 108:6 111:13,20 112:6,13 113:4,24 114:9 117:10 119:8,10 121:1,18 122:3,8,15 127:15,22 127:23 130:24 131:5,20 132:1 133:5 139:4 141:3 142:1 143:3 150:8 San 4:7 sands 208:18 Sarah 7:13 satellite 204:22 205:2 satisfied 145:9 satisfy 161:20 169:16 170:6 saturated 173:21 saturation 173:18 227:15 227:16 save 12:1 98:1,9 99:22 113:18 117:13,13 136:17 138:3,3 saved 97:15 saves 99:23 saving 98:3 99:3,25 148:5 savings 40:7 saw 17:16 34:1 42:18 50:25 54:22 76:8,11 77:1,5 87:17 105:23 158:2 164:24 170:17 180:20 183:18,24 199:10 209:24 215:4 216:6 222:7 231:3 239:6,12 243:21 saying 32:6 41:21 42:8 65:2 77:24 87:18 103:7 103:13 113:11 121:8 122:18 123:5 126:2,3 126:10,20 128:5,6,18 137:25 139:3 144:7 146:23 156:23 160:12 162:2,3 173:25 176:6 189:25 190:5,7 203:14 208:23 215:10,11 217:2 228:15 233:5 234:10,13 237:8 238:15 241:6 says 14:2 15:19,22 16:5 17:4,14,20 18:2 19:7	21:25 26:10 32:17 33:10,15,25 34:1 37:4 39:15 49:19 54:9 64:19 66:7 67:1,21,22 78:12 78:13 82:4 91:12 92:2 92:12 103:16 104:18 110:22 115:20 119:20 121:3,24 129:22 130:18 131:1,7 145:5 146:3,4 160:6 161:18 162:23,24 162:25 163:10,16 165:8 165:25 172:9 178:21,23 179:11 183:2,21 184:1 184:13 187:17 188:5,6 188:16 189:6,12 193:20 200:9,21,23 201:16 202:9,25 203:1,20 206:18,24 207:15 208:1 211:19,22 212:24 213:2 213:8 214:14 216:9 217:9 218:4 220:9 223:20 225:9,16,18,25 228:1,8,21 232:2 237:7 240:5,8,18,23 241:4,11 241:15,22 scaling 52:11 54:1 scan 154:17,24 155:1,2,3 155:5,6,12,17,23,24,25 156:2,6,9,12,14,19,20 157:1,4,5,13,14,25 158:9,11,12,20 161:19 161:20 169:16,24 170:5 170:23,25 171:2,7,9,23 scenario 30:23 SCF 100:9 112:3 122:15 147:21 SCFH 123:10 124:23 SCFV 123:9 131:25 scope 15:15 23:24 24:7,9 24:12 27:22 43:23 51:3 74:15,20 76:15 107:2 127:9 144:12 178:5 235:22 236:17,20 Scott 2:4 7:10 172:17 scott.stevens@alston.c... 2:10 screams 108:9 screen 13:2 45:4 68:12 79:23 96:2 97:8,8,11 100:14 173:10 175:17 198:17,20 209:6 screens 96:23 97:5 script 217:8,10,10 SDR 115:9 seated 50:3 second 10:13,13,14 12:20 25:17 36:18,25 37:5	38:3,24 39:1 40:11,14 41:7,25 42:11,12,13,25 43:11,12,15 44:19,20 45:7,8,10,23 46:6 48:25 49:2 50:13 55:6,13 58:13,18 59:13 60:3,4 63:25 88:24 107:17,18 120:9 122:22 123:10 140:1 141:14 164:14 175:14,21 176:6 179:4 179:5,8,8,12,21 181:16 181:16 183:10,19,20,21 183:23 184:2,15,19 186:19,22,24 187:19 188:1,21 234:3 secondary 230:4 241:1 241:18 Secondly 47:19 secret 178:8 see 10:22 11:15 12:4 15:7 17:2 19:11,24 21:18 22:4 28:5 29:11 46:20 52:7 53:3,19 77:8,17 80:18 83:6 87:24 97:9 107:14 108:23 109:8 110:5 111:16 112:21 115:1,21,24 116:10,14 117:24,25 118:3,6,11 118:14 119:4,23 120:2 120:5,6,8,15 121:11 122:12 124:20 125:22 126:21 129:12 130:18 136:1 138:7 140:20 141:8 147:4,4 150:20 155:4 163:21 165:14 173:13,15,19,22 174:3 174:8,20 177:4 178:17 179:6,9 180:7 182:21 183:6,9,11,20 184:23 185:11 186:2 187:16 194:21 197:19 198:12 198:23 199:9,10,11,13 199:18 200:22 201:15 204:4,10,18 206:7,13 207:13 208:16 210:7 212:14 213:16 214:1,5 214:21 215:19 217:4,5 217:8,11,22 218:6 220:7 222:1,10 224:23 226:5,21 227:2,20 228:3 230:5,9 232:10 237:1,2,3 239:20,21,22 240:19,20,22 241:8 242:4 243:22 seeing 33:14 116:14 121:16 173:10 174:2 seek 42:21 44:2 102:20
---	--	--	---

seeking 79:16 83:23 seemingly 196:16 235:21 seen 9:20 17:24 159:11 176:18 199:5 216:22 select 68:22 74:14,24 80:12 88:14 203:3 208:12 213:7 select/selecting/selected 75:25 selected 68:23,25 69:6 70:23,23 71:2,3,5,6,9 71:22 72:2,6,7 73:22 74:1,16 75:6,9,11,12,17 76:2,5,9 77:8,11 78:4 78:14,23,25 79:3 83:10 83:16,17,21 84:12,25 85:12,18,22,25 87:5,7 87:10 90:4,8 91:24 202:12 210:13 211:7 212:2 213:3 218:4,8 225:15 237:25 selection 68:20 72:10 74:25 75:3 76:11 77:3 77:14 79:18 84:2,8 87:19 88:8,11 89:7,18 89:21 90:1 91:12,25 92:3,9,24,25 93:8,11,13 153:10 205:25 212:24 selector 206:7,10,14,15 208:11 210:13 213:9 225:11,13 243:17 selects 207:3,10 225:13 228:24 243:17 semantic 105:15 send 174:16,21 223:3 227:8 228:10,17 231:8 sending 97:20 228:12 sends 57:22 sense 51:14 54:7 64:25 65:2,20 66:4 87:9 91:25 147:14 156:4 158:23 172:4 189:14 229:13 sent 63:4 174:24 175:3 229:19 230:24 231:25 sentence 19:11 31:10 88:2 92:11 103:2,11 121:25 241:8 separable 101:6 separate 59:7 75:1 100:9 101:9,12 102:25 108:7 108:10 114:21 117:12 119:14,14 121:2 123:4 135:24 148:15 150:16 150:17 155:17 201:12 203:15,18 205:20 212:5 212:13 213:6 216:23 217:6,12,19 221:12	239:14 242:2,19 244:25 separately 13:20 14:1 100:21 110:2,6,25 132:15 137:8 139:2 140:3 141:5,7,9 142:1 150:12,13,22 211:21,25 220:14 237:8 separateness 113:8 separates 138:20 separation 212:20 September 1:20 sequence 20:19 27:3 53:2 69:8,15,22 70:9 76:11 81:9 155:9,13 sequential 75:1 113:3 Series 110:19,23 serious 164:17 serve 69:18 server 233:15 SESSION 134:1 set 93:6 94:9 107:18,18 108:18 114:18 166:10 174:1 180:8,17 202:21 207:3,4,11 214:10,22 228:25 234:7 237:21 sets 72:11 177:25 183:5 206:22,24 207:4 209:19 228:13,25 237:22 setting 72:25 120:21 shape 11:2 152:3,24,25 153:1,11,15,16,24,25 154:3,6,19,25 155:3,8 155:12,18,24,25 156:2 156:6,10,14,18,20,25 157:5,6,13,24 158:1,6,6 158:20 159:13 160:1,4 160:11,11 161:16,22 162:15,25 163:17,24 164:2,5,9,10,16,17,18 164:22,23 165:2,2,12 165:13,14,15,15,18,18 165:19,24,25 166:1,3,6 166:7,15,17,19,20,21 167:9 168:2,3,16 169:4 169:8,10,10,13,13,21 169:24 170:18,24 171:1 171:1,8,10,20,20,21,21 171:22,23 172:5 shapes 153:3 154:15 169:7 171:15,17,17 shared 110:13 shift 114:4 shifting 208:18 ship 196:1 ships 195:19 shortly 181:13 207:6 show 17:9 18:15,21 92:7	109:23,23,24,25 111:4 118:15 140:5 142:24 143:6,8 145:22,23 152:24 171:5 174:10,14 178:10 182:15 185:5 193:13 238:20 239:20 showed 34:23 103:4 113:3 125:16 169:2 194:17 228:21 232:11 238:8 239:25 240:8 243:16 showing 12:2 33:8,9 51:23 114:7 116:25 121:17 130:23 shown 10:24,25 11:14,20 12:11,16 16:4 54:21 57:16 79:23 80:17 81:5 83:1,4 85:5 87:16 88:22 91:10 95:20 96:3 101:13 102:14 103:18 105:11 130:6,9 143:2 163:15 175:17 185:2 204:5 206:6 212:23 235:3 shows 10:6 16:1 72:16 75:19 94:9,11 106:5 112:10,12 113:7 128:21 128:23 131:21 154:20 158:8 160:23 183:19 189:3 205:21 214:23 215:9,12 216:17 217:19 shrinks 97:4 side 14:15 66:7,18 83:4,4 94:1,2 97:21 100:13 106:4 127:20 195:18 202:11,11,17 204:1,3,6 204:8,10,11,13,16,17 204:25 205:6,10,11,13 205:15,17,20 213:17 218:17 219:21,22,23 221:21,22,23 222:2,4,5 222:5,9 231:1,2,5,11,13 231:15,15 232:9,9,13 233:21 239:8,9,16 240:16 241:4,16 243:10 244:24 sides 204:4 221:20 232:8 sig 153:22 sign 112:12 signal 102:19 149:14 183:14 207:12,14 signaled 207:12 signals 18:11 Signature 247:8,16,21 SIGNED 247:7,15,20 significant 25:4 signs 112:11	similar 15:3 16:16 17:22 24:23 26:3 28:14 29:20 33:14 38:14 54:15 55:10 59:22 95:23,24 103:19 105:5,8 165:11 182:13 202:5,13,19 227:5 240:12 similarly 189:12 213:23 simple 136:15 153:25 159:12 160:5 168:22 simpler 181:16 188:22 226:15 simplify 108:1 126:2 152:11 223:15 simply 18:14 21:3 38:14 48:22 51:14 74:21 75:4 86:24 91:6 101:8 104:24 128:12 179:2 186:17 190:25 232:3 simultaneous 102:18 149:13 simultaneously 110:12 sin 245:13 single 13:4 21:10,23 22:8 46:19 50:6,10 100:17 100:18 101:9 102:7,15 102:19 103:1,15,15 104:1,1,6,13 105:3,16 105:24,25 106:10,13,13 106:14 107:6,12 108:2 108:18 109:10,13 111:5 111:25 112:19 114:21 114:22 117:3,6 119:5,8 120:4,14,15 121:9,10 121:11,12,17 122:3,4,9 123:13,19 124:23 125:1 125:2,11,14,15 126:14 127:18 128:1 128:1,13,17 128:18 129:5,23 130:2 130:20,21 131:11,22 132:11,20 133:6 134:8 134:10,14,24 136:12 137:20,22 138:2,6,6,7,8 138:9,11,13,13,16 139:11 140:22 141:9,17 144:7,9,12,13 145:7,15 145:16 146:1 147:3 148:2,11,23 149:3,8,24 149:25 150:9,16 201:5 209:17 single-filter 105:19 singularity 82:14 sink 215:22 sins 21:12 sit 173:6 180:2 situation 30:21 108:17 119:12,13 128:12,16
--	---	--	---

189:17 190:23 192:8 234:9 situations 18:13 six 9:11,15 size 11:1,6 28:18,23 95:15 96:18,21,22,24 97:8,24 98:8,8,20,23 101:14,15,22,25 103:5 115:11,11 116:15 117:7 117:8 126:8 135:9 169:18 sizes 96:9,21,23,24 97:2 skill 13:16 17:9 18:6 22:23 23:24 26:7 30:11 30:15 39:7 42:12,15 49:4 50:20 51:14 93:14 123:15 124:5 131:14 197:21 215:12 217:13 238:21 skilled 31:12 skip 81:19 87:15 102:4 sky 11:15,16,17 12:4,5,8 12:9 slice 10:25 11:1,3,4 17:6 17:7 slide 9:16 10:10,25 11:13 12:3 13:14 14:9,16 15:18 16:1,5 17:13 19:4 19:14 20:13 21:6,17 32:11 34:15 41:23 42:18 44:9,10 45:2 50:21 51:16 52:20 54:20 55:18 56:8 64:18 66:25 77:1 82:24 85:5 85:13 86:4 87:15,16 88:22,25 89:2 90:17 92:19 93:23,25 94:16 100:14,14 101:13 102:14 105:12 106:5 107:2,24 109:8 117:17 117:19,21,22 118:14 119:25 122:18 124:7 125:13 130:6,10 131:2 134:24 145:13 147:16 159:25 162:20 163:15 165:22,23,24 166:9 180:14,20 183:7 184:24 185:13 186:2 187:4,16 189:6 197:18 200:23 201:15,16 203:1,19 204:5 205:23 212:21 214:5 215:19,20 216:9 216:14 217:6,18 218:6 218:6 220:7 221:16 227:20 230:25 233:12 237:1 slides 34:1 77:22 78:10	93:24 102:10 105:23 106:23 119:3 138:5 162:19 186:8 223:13 slightly 230:3 241:1 SM 69:13,14 small 67:21 97:4 smaller 11:5,8 12:10 28:20 96:14 98:19,22 100:3 118:15 135:1,6 135:13 smaller-resolution 99:16 smart 1:8 7:5 97:19 247:1 smear 83:2 Smith 247:20 snippets 77:8 102:11 software 72:22 73:7 89:5 102:20 208:2 sole 72:14 solely 151:23 169:16 solution 114:18 224:18 solve 171:24 180:24 181:24 183:4 200:14 201:10 224:19 solves 96:13 98:10 somebody 179:1 someone's 198:20,20 somewhat 50:14 105:5 sorry 32:22 50:12 56:3 65:10 68:8 77:23 87:1 96:20 153:7 180:8 184:3 189:22 197:21 205:10 217:17 239:13 245:1 sort 30:21 84:22 93:17 98:18 142:6 145:12 156:13 173:15 174:11 176:14 196:4 221:17 227:8 233:4 235:8 sorts 63:8 225:3 226:4 Sound 69:2,9,20,21,25 70:3 71:16 73:21 74:6 75:19 76:5 90:19 91:3,5 91:6,18 sounded 32:6 223:25 sounds 8:22 49:1 source 45:7 205:20 206:17,19 216:10,19 228:6,8,8 242:19 243:13 source's 217:21 sources 45:18 225:3 South 3:15 space 98:4 182:18 188:5 215:23,24 216:11,20,20 spaces 182:14 span 17:8 spatial 12:2,17,18 15:20	15:24 16:2 28:25 29:2 33:5 226:8 spatially 13:25 16:7 81:8 speak 9:5 149:6 179:4 speaker 247:13 speaking 199:2 spec 16:2 92:2,12 127:11 142:7,11,16 153:9 154:17 155:15 157:7,15 169:11 182:9 183:21 213:20 239:6 243:1 special 18:3 21:2 34:4 56:6 specific 42:22 58:2 72:3 110:1 128:6 142:25 143:7 152:21,23,25 167:5 186:20 194:16 198:6 208:7 239:19 specifically 53:12 54:9 63:5 67:6 88:21 153:11 170:17 222:11 230:16 specification 17:3,17 18:25 22:15 29:3,14 30:13 32:12 33:4,10,22 35:23,25 36:8 39:8 40:16 41:5,9 44:14,16 47:21 48:2 51:17 52:2 53:12 55:2,3,19 58:25 59:1 60:15 69:7 72:8,16 74:8 75:2 77:17 89:23 91:8,9 92:7 93:9,20 100:23 101:10,16 102:3 103:4 105:6 109:23 112:15,21 119:6 122:6 124:4 125:5,10 126:21 127:1,14 133:3 146:4 162:14,15,23,24,25 163:16,18 164:13 166:14 167:10 168:20 177:18,19 183:12 184:23 185:11 194:16 195:2 198:21 206:3,18 207:2 211:20 212:19,19 212:23 213:1,5,6,11,13 213:17,18,20 214:11 218:3,3 220:17 222:2,8 222:25 224:13 226:6 227:22 228:24 230:16 231:23 232:8 234:12 239:24 241:10 245:12 specification's 40:8 73:12 specifications 17:18 159:19 182:8 212:25 213:4 214:22 226:11 230:3 234:8 240:25 specificity 195:4 specified 99:21	specifies 59:14 specify 104:2 164:19 specifying 189:9 211:23 specs 182:5,12 198:22 199:23,25 202:5,19,24 203:16 207:21 239:20 240:7 spelling 247:12 spend 113:21 230:20 spent 221:9 227:21 spite 131:2 split 139:8 spot 172:20 spread 116:16,16 square 153:2,16 155:7 squares 169:20 stage 180:17 stages 100:9 102:25 113:7 120:23 staircase 166:5 169:3 stand 193:5 standalone 206:11 standard 15:11 19:9 34:12 114:4 182:12 standards 13:15 16:25 17:2,18 standing 143:6 stands 112:6 113:15 213:10 stanza 177:4 179:4,8,9,12 179:21 start 8:10 41:21 42:8 52:18 62:11,12 76:25 144:2 154:20 155:10 173:13 180:15 197:16 208:23 210:6 221:6 225:24,25 236:12 238:6 started 85:13 235:1 starting 24:20 181:19 starts 79:10 87:11,12 235:13 state 207:16 stated 60:2 statement 27:16 34:12 40:8 173:14 235:4 237:6 statements 19:7 21:15 22:6 27:9,13 28:10 29:1 29:15 32:4 34:17,19 40:5 127:2,4 164:7 215:7 222:1 236:5,16 states 1:1 83:13 85:10 198:1 statistics 73:9 status 69:4,19,24 70:19 70:20,24 71:3,5,10,23 75:18 76:7,9 77:9
--	--	---	--

stay 36:14 staying 114:13 210:5 stays 10:20 steal 117:17 steel 165:6,9,10 step 70:6,9,10,15 93:8 114:22 115:2,3 117:3 117:12 125:20 130:7,8 136:24 137:8 138:2,2 141:13,14 188:17 191:20 203:13,21 208:6 224:24 231:22 Stephen 3:13 7:14 221:5 245:8 stephen.lareau@alston... 3:19 stepped 82:24 steps 69:10,15 70:11,12 70:13 94:10,10 99:25 114:21 115:21 117:13 136:23 Steve 7:21 Steven 4:13 5:13 8:1 steven.anzalone@fishe... 4:19 Stevens 2:4 7:10,11 8:12 8:18,23 9:10 31:24 68:6 76:21 172:16,17 180:5 192:16,19 194:11 195:7 195:22 246:3 sticking 176:9 stop 220:23 223:10 245:2 store 9:21 stored 10:2 95:24 96:18 100:10,22 113:15 129:8 131:1,12 147:22 204:22 storing 96:15 98:12 136:21 straight 102:2 112:20 113:13 119:16 122:16 131:6 straw 166:10 224:8 stream 9:23,25 10:2 12:6 12:10,13 13:3 55:22 57:8,14 58:5,11 65:23 65:25 66:11 67:23 129:13 174:16 175:12 175:14,19 183:6,22 184:13 188:18 189:1 230:11,12,24 233:22 237:21,24 streaming 9:22 10:8 streams 10:4 173:1 Street 1:17 2:7 3:6,15 4:6 4:15 5:15 6:6 stretched 97:10 strict 90:21 93:16,21	strictest 123:6 strongly 165:9,12 structure 128:6 structures 108:25 studio 198:18 stuff 113:21 210:22 sub-block 160:2,3 168:2 subblock 152:3,24 subblocks 11:8 subelements 54:16 submacroblock 28:22 submit 236:19 submitted 95:3 236:18 suboperation 89:5 subpart 128:11 subsampling 135:5 subsampling 100:25 101:3 125:23 126:17 136:8 subsequent 76:14 subsequently 202:10 substance 151:6 substantial 52:21 85:6 substantive 30:18 235:24 247:13 substitute 175:24 176:4 successfully 177:13 195:25 successive 129:18,22 134:14 137:11,18 138:20 147:3,4,10,18 148:7,9 195:10,12,14 successively 101:6,17 111:19,22,23 116:21,22 120:16,20,23 121:4,4,4 129:21 132:15 139:2 140:18 148:23 176:8,25 178:22 192:24 sudden 153:23 suffers 236:10 sufficient 129:3 sufficiently 146:21 suggest 79:5,14 89:3,6 93:18 102:23 178:25 235:14 suggested 78:1 177:24 suggesting 240:2 suggestion 93:14 241:3 suggests 89:25 90:25 91:12 Suite 3:6,15 4:6,15 5:6,15 6:6 suited 82:14 sum 22:12 168:15 summary 235:19,20,21 241:13 summer 52:11 61:22	67:15,16 summing 58:9,13 super 11:7 supplementation 31:23 supplied 27:10 69:21 128:15 supplies 39:24 58:9 72:15 72:24 76:9 supply 39:16 59:8 support 27:9,14 60:15 92:21 93:20 160:15 164:24,25 186:12 229:14 233:9 236:21 supported 77:16,16 87:23 89:9 91:17 144:3 163:23 206:21 supports 40:3 111:5 132:12 210:9 213:23 supposed 64:13 171:4,5 171:11 174:2 184:19 sure 14:19 30:24,24 33:19 60:22 67:18 86:5 94:17 118:1 134:11 141:1 142:7,9,13 143:11 144:11 156:19 158:17 159:9 166:2 167:1 171:7 176:5 179:17 186:16 195:14 195:19 199:15 244:7 surround 200:11,12 suspect 145:1 suspicion 179:18 193:7,9 Swain 2:5 7:16 swap 177:21 178:15 swapping 163:13 179:24 switch 79:20 206:25 207:3,8,10 switching 193:24 synonyms 105:7 system 117:17,23 139:14 233:6 systems 139:20 140:12	169:7 172:1 173:6 174:5 175:11 189:18 192:12 197:4,6 205:1 218:13 220:23 224:24 233:2 234:3 240:4 241:7,8,12 243:9 245:24 taken 119:16,23 151:16 152:5 162:17,25 192:1 192:4 takes 12:9 65:22 141:18 166:24 talk 31:17 34:14 44:11 83:18 95:7,10 107:1 113:7,23 115:5 124:8 124:19 127:17 155:22 167:11 170:2 172:19,22 181:23 186:19 190:1 195:17 222:8,11 232:21 236:9 talked 12:20 14:24 15:25 33:4 34:16 44:12 108:9 125:16 130:10 138:5 162:19 166:4 184:12 186:22 188:24 205:19 talking 44:13 46:12 65:22 67:5 68:1 77:24 96:25 106:25 107:20 108:13 108:24 110:9 112:4,22 112:22 115:3 120:6 122:25 124:17 126:25 127:5,20 137:23,23 138:1 154:15 172:18,25 174:23 175:6,10 176:23 183:3 212:5 220:3,6 227:21 230:10,11,20 235:1 236:20 240:14,14 241:12,21 talks 46:10 54:17 55:3,5 68:2 117:5 122:7 124:9 125:19 135:7 153:4 154:21,24 183:5 188:4 188:8 200:7 220:13 237:15 241:15 tall 170:19 tandem 110:13 tangential 194:20,25 tapes 247:18 target 36:14 183:15,17 186:23 187:1,2,6,25 task 200:17 201:9 Taylor 7:17 TCL 5:11 7:22 95:1 102:8 151:3,7 teach 229:2,3 teaches 131:7,7,8,8 226:3 teaching 38:14 229:17
---	---	--	---

teachings 236:17 technical 198:22 technically 117:14 154:12 technique 21:21 143:2,7 143:10 techniques 13:22 82:13 142:22,22 technologies 173:6 technology 8:10 45:20 95:11 119:19 199:17 227:9 228:2 245:22 Tehrani 186:3 television 10:6 57:18 108:18 Televisions 1:8 7:5 247:2 tell 13:4 52:2 56:22 109:6 137:14 141:21 158:21 167:15 184:20 210:14 224:23 235:6 239:1 telling 23:20 54:24 81:14 154:14 184:14 tells 26:9 64:19,23 100:23 183:14 210:15 227:1 229:7 230:13,22 temp 12:22 template 162:17 163:16 temporal 11:23 13:9,10 16:6 69:3 72:1,16 73:5 73:19,22 74:4,23 75:23 76:6 77:19 78:7,19,23 79:7,13,15,17 84:8,13 85:2,24 86:20 87:5 90:22 93:16,21 temporally 14:1 81:8 88:8 temporary 116:19,19 tend 229:15 tens 201:6 tense 196:6 term 8:23 14:23,25 15:1 16:24 17:2,15 18:8,9,12 18:16,21 20:23 22:22 22:23 23:18,19 25:22 28:7 31:15 32:9,15 34:2 34:8 35:9 36:4,13,16 40:21 41:20 42:2,7,19 43:2,9,10 47:8 49:22 50:5,5,6,7,10,11,13 51:6,7 59:6 65:7 68:5,7 68:8 74:20 76:22 77:2 83:17,18 84:12,13,25 84:25 85:8,9 89:6 90:13 91:13 94:23,25 95:7,10 102:9,12,14,21 103:22 104:16 105:15 106:8,16 106:22 109:10 112:2,7	113:5 130:2 133:1 144:22 146:6,24 151:1 151:15,17,25 152:2,4 159:10 160:1 163:2 164:22 165:8,14 168:3 168:7,16 172:13 178:18 181:6 185:18,22,23 186:6,14 191:10 196:13 196:18 197:2,13,13 208:23 210:1 216:17 224:8,21 225:2 229:6 236:3 238:25 239:2 241:14 terminal 214:8 233:7 234:5 terminals 214:15 234:10 234:17 terminology 40:4 terms 8:11,13,15,17,20 9:14,17 10:7 13:17,17 13:18 14:20 18:14 21:2 23:14,15 24:19 34:5 39:10 42:9,20,22 43:17 48:12,12 50:7,11,16,23 51:9 52:22,24 54:8,13 56:6 59:10,10 61:10 64:10 68:20 71:8 84:6 85:7 96:25 98:1 104:16 104:20 105:2,6,7,8 119:11 121:3 136:15 144:12 148:7 156:25 157:1,20 159:11 160:6 160:8 161:9 163:12,14 166:2,23 176:20,22 177:18 181:3 185:12 215:13 241:8 246:6 text 227:22 texture 82:9,25 textures 82:3,15 thank 7:19 8:2,7,8 22:25 23:1 30:2 31:19 35:20 36:11 40:19 41:16 47:10 48:17 49:15 52:16 56:18 60:18 61:2 62:9 65:11,14 66:22 68:3 76:17,19 79:21 90:9 91:20 92:13 94:4,5 94:18,20 106:19 133:11 133:14 143:15 146:7 150:4,25 158:13,14 168:24 171:11,13 172:15 180:3,5,13 190:10,13 192:14,15,19 195:6,7 196:10 197:1,2 197:7 221:1,2 238:1,2 245:3,8,17,18 246:4,5,8 246:9	Thanks 245:21 theater 199:14,17 themes 23:15 theoretically 188:6 190:15,19 Thereof 1:9 7:6 247:2 thing 18:24 28:11 50:9 61:11 66:21 70:21 87:15 93:2 113:25 124:12,16,25 155:25 156:2,5,6,20 158:20,23 159:1 172:3,7 175:2 177:25 178:4,16 180:22 202:6 235:11 things 10:19,19 29:14 34:10 47:12 63:21 78:8 95:16 101:9 110:2,12 110:15 111:24 128:14 129:8 139:15 140:14 141:4,21 142:24 145:20 146:2 149:1 150:7 152:11,12 156:1 157:8 166:19 167:16 169:19 171:25 172:2,9 175:1 179:24 181:1 189:5 193:3,12 199:5 212:6 213:6,24 216:23 217:16 223:15 226:7 227:14,18 think 8:12 9:7 29:8 32:10 33:19,20 34:15 42:8,10 42:11 44:1 45:3 46:11 47:7 48:11,15 49:3,6 56:4 61:2 64:16 65:9 66:6 68:6 79:22 113:10 117:1 121:25 122:10 124:5 131:22 136:14 137:15 139:17 141:22 143:21 145:21 146:13 150:7 157:12 158:22 159:4,7,10,13,23 160:19,20,22,24 161:2 162:1,11,19 164:16,21 164:23,23,24 165:6,11 165:12,17 166:4,25 168:15,17 169:6,7,10 169:11,22 170:3,17 171:25 172:16 180:24 181:1,20 182:2,11 184:17,17 188:22 193:15 194:8,22 195:13 196:6 197:3 205:16 210:3 214:4 215:16 223:25 224:20 229:15 231:11 232:25 233:1 239:23 241:3 thinking 193:8,8 third 59:13 128:15 161:6	thought 117:19 151:15 196:1 thousands 201:6,6 three 14:20 23:15 84:4 110:18 129:8 135:19 155:11,11 176:8,25 177:10,10,13,14,14 178:22 234:11 three-by-three 194:18 threshold 140:8 thumbnail 116:5 135:2 thumbnails 116:5 tied 36:25 170:16 time 13:12,16 14:2 23:4 30:9 56:17 76:19 79:1,2 79:18 81:13 83:8 84:1 85:15,16,16,17,18 87:12,12,13,24,24 88:17 90:6 106:20 107:14,17 113:21 116:21 117:14 120:8,9 122:7 138:3 141:16 142:24 149:10 161:6 172:16 180:3 186:10 192:14 197:4,20 215:12 216:17 217:13 220:25 221:9,19 223:2 227:21 230:20 236:4,7 239:18 242:21 243:12 timeline 78:7 83:23 87:6 times 25:2 35:12,13 84:17 112:22 115:12 117:4 121:11 126:6,22 140:6 145:14 164:19 173:1 182:8 239:1 timing 87:2 today 7:13,22 8:1,4,7 68:9 83:19 84:17 95:7 103:21 109:12 117:20 159:11 162:3,19 168:8 172:19 175:5 176:18 184:21 191:22 195:16 220:16 229:21 231:19 235:4 246:2 told 25:6 29:6 59:18 95:5 102:8 137:14 195:23 tools 59:11 top 16:22 17:4 19:16 21:14 33:11 85:5 96:1 103:20 115:24,25 116:3 116:3 135:4,10 173:6 178:18 206:7 231:18 233:12 total 9:14 59:16 touched 84:6 Toyota 45:12 tracks 212:20
--	--	---	--

Trade 1:1,16 247:6,11,18 transcript 94:18 247:5,10 247:14 transcription 247:12,14 transform 52:12 66:14 81:23 175:21 176:7,11 176:24 177:9,12 178:21 179:6,12,15 180:18 181:7,8,9,10,17 182:22 183:2,3,22,24 184:5,6,6 184:8,22 185:2,7 186:24 187:1,3,10,17 187:22,23 188:2,8,11 188:18,19,22,25 189:3 189:7,7,10,13,14 190:1 190:2 191:23 transformation 54:2 transformed 164:1 167:14 transforms 175:16 176:8 176:10 177:1,13 178:23 180:19 181:11 184:4,11 184:15 185:8,9 187:9 transition 153:23 154:4 translates 194:9 translating 191:1 transmit 9:21 transmitted 10:2 transmitter 57:21 transmitting 233:20 transport 162:15,16 travels 11:21 traversed 167:20 168:11 treat 58:23 treating 235:5 treats 216:21,22 237:8 trend 175:22 triangle 173:21,23 tried 97:5 117:18 124:12 157:10 240:6 trouble 9:5 68:9 true 69:25 134:18 174:19 199:7,8,15,17 228:10 231:25 247:5,14,19 truly 124:10 try 32:3 57:25 134:21 168:19 169:15 173:9 175:6 179:22 197:24 199:21 201:10 225:4 235:6,7 236:23 238:4 245:12 trying 30:17 31:1 32:8 33:21 87:1,14 106:11 107:19 114:11 123:14 123:25 124:1 125:8 134:9 144:12 146:17 156:17,18 159:15	164:21 169:23 171:18 178:23 180:9 185:23 191:14 194:20,24 196:13 200:14 221:13 222:22 223:24 224:18 225:20,21 237:4,4 Tryon 3:15 Tsai 131:15 Tsui 3:4 7:13 8:24 9:1,1,7 9:10 23:2 32:2,22 33:2 68:7 158:15,16 159:9 165:4,19,22 171:14 245:13 Tsui's 42:18 turn 8:24 15:16 50:4 68:10 81:11 91:8 94:21 106:18 161:2 165:4 188:21 224:20 234:25 turning 10:10 15:18 17:13 19:4,14 20:13 21:6 44:10 50:21 51:16 turns 51:13 171:2 tutorial 8:10 57:16 TV 114:2,4,7 172:24 173:2,4,4,7,9,18,21 174:7,9,19 175:4 184:10 198:20 202:11 202:17,23,23 205:12,12 207:21 223:20 226:14 226:17,18,18,20 228:18 TVs 10:12 182:7,11 201:3 tweak 199:23,24 209:14 234:11 tweaked 244:22 tweaks 176:16 twice 107:11 120:8 122:21 161:5 179:18 twisting 228:16 two 11:12 13:12,22 14:8 36:22 37:16,17,19,20 38:15,16 39:17 41:24 43:24 45:18 46:2,4,5,10 47:15 48:22 49:6,13 50:7,11,22,23 55:8 59:16 61:10 63:11 69:15 77:8 80:18 81:4 94:10,10 99:25 100:19 101:9 102:15 106:9 111:12,17 112:17 113:20 114:21 116:11 117:18 120:9,9 121:16 121:23 122:8 123:8,18 124:11,12 125:13 127:16,19,21 132:8 134:12 135:14 136:23 137:4,13 138:11,21	139:21 141:10,24 145:15,19,24 146:2,2 147:5,8 148:11,13,15 148:18,22 149:25 150:2 155:10,11 156:1 157:8 157:17 167:16 171:18 172:9,21 173:11 176:16 178:13 179:24 180:14 180:16 183:5 189:5 193:12 194:3 203:7 208:25 212:17 216:23 221:20 229:23,24 230:9 236:5 two-dimensional 53:2 tying 128:7,18 type 11:19 12:1,17,20 13:9 14:18 36:17,18,23 37:1,2,5,6,6,11 38:8,11 38:15,17 39:15 40:14 40:14,15,16 42:16,25 43:11,11,13 44:18,19 44:20 46:6,20,22 48:25 48:25 49:2,3,12 184:4,5 185:2 191:8 types 11:12,25 13:13 19:3 36:22 37:16 38:3 39:13 39:21,23 41:7,24 42:23 45:21 48:22 49:7,14 59:15 typically 9:24 11:4,8 U U.S 247:6,11,17 ultimately 76:16 80:12 88:15 175:15 181:6 199:18 216:3,12 unacceptable 109:14 uncomfortable 118:2 undergo 243:18 undergoes 63:7,8 underlined 16:23 underlying 145:24 149:9 161:1 174:17 understand 23:25 29:10 30:15,18 31:1,2 39:9 42:11,13,15,25 51:15 62:13 87:2 93:15 102:10 112:16 118:2 123:15,16 124:1,6 125:8,9 127:12 129:3 134:9 144:19 159:17 186:16 191:12 208:23 209:16,25 226:16 232:25 understandable 24:7,8 146:21 understanding 17:10	24:2 38:2 44:23 78:24 79:17 91:18 103:2 166:25 214:24 217:14 237:20 understandings 232:24 understands 32:15 146:25 168:18 216:17 understood 13:17 14:25 16:24 42:17,21 49:3,15 50:19 102:22 105:10 132:17 159:7 192:10 215:13,13 220:2 238:1 238:21 undisputed 41:12 undo 27:17 161:24 unelected 245:11 Unfortunately 23:22 28:1 unhelpful 160:23 unique 18:4 182:15 201:4 202:2 203:15 234:1 unit 51:21 52:5,7 53:9,14 53:16,20,23 54:5,10,22 55:1,4,7,9,10 58:4,9,14 58:20 63:14 64:3,11,15 64:20 65:17 67:7,9,12 206:12 225:10 UNITED 1:1 universal 72:1 universally 71:6 unmistakable 15:13 22:17 34:5 74:2,12 84:21 85:1 unpatentable 132:5 unplug 198:24 unpunished 107:10 unrelated 236:22 unresolved 23:24 24:17 76:16 unselected 71:12 unwanted 80:4 updated 172:14 245:23 upper 15:22 16:1 82:18 upsample 113:25 upsampling 100:25 101:2 125:23 126:16 upside 166:4 upstream 191:19 usage 148:6 use 11:5,25 13:6,7,8,20 13:20 14:6 16:6 28:12 28:19 33:11,17 34:6 36:24 37:20 42:3 43:4,5 43:17 50:23,24 51:1,6,7 55:23 58:23 70:19 71:2 75:6,8,12 78:20,25 81:23 85:14 104:23 105:24 110:9 111:17
---	--	---	--

119:15,20 122:12 136:21 143:1 156:23,23 157:10 159:17 161:6,8 167:5 173:8 174:5,18 177:3 196:14 205:17 212:8 226:14 227:18 229:7 237:4 user 10:5 81:3,6 174:1 202:16 214:15 234:17 uses 13:9 16:2 43:10 47:15 51:10 59:6 70:22 71:24 75:16 78:13,16 88:15 112:2,3 148:1 153:25 161:5 185:12 223:21,21 240:19 241:14 usually 11:7 66:13 utilize 99:13 223:5 227:10	201:4,12 202:3 203:22 205:22 206:1 219:3,5 229:18 231:6 234:13,14 236:6 239:10,14 242:2 242:19 243:15 244:22 versions 96:16 129:8 200:2 203:21 204:8,14 205:20 207:20 209:24 219:14 221:24 228:5,17 228:18 230:6,10,14 231:4,9,24 232:12,16 232:18 244:21,24 versus 10:23 30:22 64:11 65:18 87:3 111:22 129:20 137:11 138:21 140:17 148:7 170:9 181:10 182:11 184:18 186:3 194:1 215:15 238:21 vertical 100:18 103:15 106:13 107:16,17,21,21 111:18 116:12,22 120:9 120:15 122:21,25 125:1 129:20 130:12,21,22 131:4 132:19,20 138:13 146:1 148:2 149:15 153:9 155:8 158:5 vertically 118:12 vice 45:9 147:11 video 9:13,13,19,20,21,22 9:22,23 10:8,11,12,17 11:13 13:15 16:24 17:1 17:17 20:17 26:25 27:3 53:1 55:21 57:7,12 58:16 65:23 66:2 67:2 67:19,22 72:10 81:8,9 81:16,16 82:8 172:20 172:25 181:25 182:3,3 182:9,10 198:15,16 199:22,24,24 200:1,4 201:1,5 202:20,22 203:11,15,18,24 205:9 205:20,22 231:21 239:11,14 242:3 Video-Capable 1:7 7:4 247:1 videos 204:2 213:24 view 41:23 45:3 61:5 69:2 69:9,20,21,25 70:3 71:16,16 73:21 74:7 75:19 76:5 89:16 90:12 90:15,19 91:3,5,6,18 124:3 132:5 138:9 139:11 148:12 162:14 175:24 181:3 187:24 189:3 194:9 209:17,22 209:22 210:8 211:16	213:23 220:1 229:9 viewed 142:8 viewer 174:8 viewing 201:19,19 230:8 242:13 violates 44:7 violently 150:6 virtual 201:13,23,25 202:6,10,12,14,18,21 202:24 203:2,5,8,12,15 203:16,19,23,24 204:1 204:9 205:21,24 206:4 206:19,21 208:3 211:21 211:22 212:4,11,16,24 213:5,11,16 214:20 221:25 222:23 223:2,3 223:4,18 224:5 226:3,3 226:6,19,20 227:3 228:9,10,12,14 230:7 231:6,22 232:3 233:23 234:19 239:11,12,13,15 240:9,15 241:20,22,24 242:10,11,16,17 243:11 243:20,22,25 244:2,11 visual 80:4 visually 82:1 vivid 199:11 VM 206:4 208:4 213:20 213:20 VMs 206:20 213:10,10 213:12 Vonage 127:6	222:9,20 223:9 224:24 227:23 229:19 231:10 231:12,14,17 232:21 233:2 235:11 236:9 238:14 242:22 244:15 wanted 43:18 51:5 60:17 65:12 66:24 88:24 94:17 95:1 107:12 161:6 174:20 177:3 190:14 wants 123:3 156:7 163:10 warped 82:24 washed 244:13 Washington 1:2,18 2:8 4:16 5:16 6:7 247:3 wasn't 142:7 162:2 218:20 220:3 watch 10:5 114:14 199:7 watching 114:1 199:8 205:12 water 194:12 waving 114:13 way 9:18 10:8 59:6 67:2 72:17 83:9 93:19 97:17 100:21 105:18 120:6 126:2,3 128:6 141:23 143:17 154:9,17,23 155:15,25 162:5,10 164:12 173:7 174:10 182:2 188:20 198:6,12 199:10 215:22 219:25 228:1 234:1 235:22 ways 58:6 73:11 120:2 141:20 143:11 149:17 194:16 we'll 8:14,20 9:25 14:19 58:7 135:2 152:25 173:13 179:9 186:8 206:13 207:6 221:7 224:12 226:14 239:20 we're 7:3 8:18,19 12:2 15:7 22:19 23:23 24:8 28:11 36:2,3,8,9 40:24 40:24 48:5,20 49:2 50:4 66:7 67:5 68:6 78:24 83:18 95:7 96:25 106:25 107:20 108:13 109:14,21,22,23,24 115:3 123:5 124:17 125:6 126:3 127:11 128:5,7 140:21,24 144:23 150:18,19,20 153:17,21,22 154:15 168:3,8 171:11,18 172:21,22,25 173:24 174:4,4,5,15,16,20,23 175:10,13,14,24 176:5
V			
v 127:1,6 vacuum 111:9 validity 59:8,9 value 12:15 136:2 139:23 211:14 223:17 values 12:5,12 13:3 16:6 16:8 17:4,6 66:14,15 83:5 90:7 116:16 152:20 153:22 237:25 Vanguard 5:14 7:21 151:3 variability 200:7 variable 161:16,22 193:10,11 variables 162:1 234:12 variance 73:12 variant 143:2,8 variants 142:22,22 varies 81:8 variety 200:16 201:23 various 186:1 187:5 199:22,23 238:8 239:11 vary 200:10 VDM 244:11 VDMs 244:25 vector 21:20,23 22:1,2,3 22:7,8 114:15 118:8 135:10,12,20 137:2,15 verb 179:9 verbatim 119:18 247:19 verbiage 176:17 Verizon 127:6 versa 45:9 147:11 version 83:6 99:23 100:21 130:24 131:1,12 135:1 148:4 200:2,18			
W			
waiting 150:21 walk 179:5 205:18 206:5 walked 102:13 walking 77:18 want 11:2,3,6,9 15:1,4 31:22 32:12,15,16 33:9 33:18 43:1 49:1,23 56:25 83:20 91:21 94:8 94:12 108:16 116:6 119:12 122:17 123:7 127:17 128:11,15 135:4 143:5 148:25 150:23 152:19,24 153:18 156:12,17 158:25 159:1 160:9,10,11,13 163:5 164:15 166:10 169:25 170:16 174:13,13 176:9 176:11 185:5 188:15 189:17 190:22 195:19 196:7,11 199:6,9,13 201:1 202:21 207:20 209:14 215:8 217:25 218:22 221:6,8,14,20			

176:14,15,23 178:23 179:7,14 182:13 185:19 185:20,23 188:12 189:9 189:16 190:7 191:14 194:13,19,24 196:2,4 196:25 197:12 209:12 215:9,10,11 220:6,22 225:2,24 227:8 238:3 238:15,23 we've 17:24 82:17 84:16 119:16 153:1 157:10 159:11 169:8 170:13 172:18 173:14,21 175:5 195:15 209:4 211:19 212:1 213:1 216:22 225:10 weekend 246:10 Weiskircher 247:15 Welcome 8:8 went 34:18 36:5 218:16 220:16 245:1 weren't 167:20,21 West 3:6 whatnot 128:7,11 whatsoever 229:17 wherefore 241:24 whistles 173:5 white 244:14 wholly 221:12 231:16 235:5 237:6 wide 200:7,10 wider 116:17,18 170:19 width 154:16 162:16 166:13 169:19 wife 163:10 willing 170:5 wires 172:1 withdraw 27:15 withdrawing 158:25 withdrawn 219:9,11,18 220:1,2,5,20 232:10,14 witnesses 149:21 wonderful 119:20 word 28:19 37:25 41:5 51:4 55:23 69:16 70:17 71:6 75:7,10,20 76:8 78:6 88:6,20 107:3 109:16,17,18 111:2 118:23 119:23,24 120:16 132:14 153:14 163:13,13 164:15,16,18 166:24 169:25 176:14 177:3,20,22 178:5,6,17 178:18,24 179:9,14,17 179:20,21 186:4 193:16 193:24 194:23,23 195:13,24 196:14,16	200:20 224:7 225:19,20 words 20:25 22:20 25:23 29:18 30:16 37:8 38:21 40:1,24 41:10 42:4,16 43:4,6,6 48:3 50:24 51:1 63:3 100:16 104:21,22 113:18,25 119:15,16,21,22 123:2 124:20 126:2 132:23 138:8 144:15 159:12,16 159:18 160:5 167:9,9 168:17,22 175:24,25 176:4 177:5,24 178:3 178:14,15 179:25 194:3 209:16 210:19 212:8 219:14,15,16 222:16 232:18 wordy 152:9,10 work 97:14,18 136:18 149:2 162:6 170:10 218:19 works 55:10 205:18 world 110:19,23 230:23 wouldn't 23:25 49:14 53:24 61:24,25,25 188:10 189:13 195:2 written 35:24 59:4 69:11 105:17 162:11 163:22 229:11 wrong 33:20 102:2 104:6 159:5,8 161:13 166:8 168:13 186:15,17 193:16 217:3 236:2 wrote 31:6	117:18 141:22 236:6 yellow 10:25 79:25 211:19 213:1,13 yesterday 166:4 York 2:17,17	13 50:13 57:5 58:25 59:1 59:19,21 60:1,15 67:20 67:21,22 71:14,15,17 90:22 113:23 142:19 153:7,8 154:16,23 155:14,21 203:6 239:25 240:8 132 165:23,24 134 159:25 1373 117:22 1376 105:12 13th 6:6 14 15:18 38:9 43:22 44:4 44:6 47:13,16 64:19 153:8,20 154:16 185:14 198:3 200:23 208:11,11 210:9,12 212:14 219:19 219:23 220:21 229:5 232:4,16,17 242:6 144 166:9 1461 160:20 1495 7:4 149500016092 130:17 15 38:9 50:1,15 52:25,25 54:13,16 58:19 59:2,22 64:18 66:4,6,9 71:15 91:1,4,22 155:4 197:7 201:16 203:20 242:6 1500 5:15 15th 2:16 16 17:11,13 39:14 42:18 69:10,12 143:21 155:3 155:4 158:8 184:25 16-by-16 28:21 168 173:13 180:15,15 182:16 17 89:24 109:4 125:13 155:20,20 156:3,19,23 200:9 202:15 205:24 171 227:20 173 230:25 176 233:13 18 131:3 179:4 183:18,25 189:2,6 206:10 207:2 219:10 19 19:5 36:17 37:3 38:1,3 38:5,9,11 39:4,24 40:1 40:2,5,16 42:3 43:9,10 43:18,22 44:2,5 47:14 47:15 59:22,22 187:16 19's 37:7 1926 110:19 1B 185:3
	X x 1:5,10 135:10,11,11 137:6,7 139:21,22 X1 118:10 135:21 136:5 136:11 137:15 X2 118:10 135:21 136:5 136:11 137:15 X3 118:10 135:21 136:5 136:11 137:15 X4 118:11	Z Z 135:25 136:1,4,8,11 137:7 139:22 141:7 zero 139:20 140:9 zeros 9:24,25 10:4 Zhang 163:25	0 0025 216:8 0031 217:10 0035 217:22 02 35:7 09-11-26 247:3,7
	Y Y 135:18,21 136:1,4,5,10 137:5,8,14 139:21,22 141:7 Y1 136:7 Ye 131:15 yeah 49:10 64:8 65:9 143:10 150:10 159:9 194:19 year 199:3 years 17:11 35:25 110:21	1 1 16:9 38:9,13 39:13 40:2 50:13,22 59:17,22 65:21 103:18 120:1 139:23,24,25 140:2,2,8 152:2 155:20 161:21 162:1,4,6 172:6,8,8,9 172:10 173:15 182:17 183:1 200:9 206:10 220:9 226:5 233:15,19 243:21,21 1:07 133:15 10 94:17 142:21 198:3 202:25 229:22 240:22 240:23 100 136:17 174:1,1 243:25 244:9,10,14 1000 202:4 226:17,20,21 10016 2:17 102 188:17 105 107:24 122:18 124:7 1080P 97:7 11 1:20 13:14 50:15 54:17 58:16 59:2 142:21 184:25 243:23 244:3 111-1 233:16 112 47:20 169:9 1120 3:15 12 14:9 92:18 94:3,17 142:18 153:7 154:20 169:2 200:15 205:23,24 206:9 207:2,9,15,25 243:22,24 244:3 120 10:13 1200 4:15 1201 3:6	2 2 13:15 16:25 36:17 59:12 79:21,24 80:17

87:17 107:2 113:11,23 117:4 125:22 135:11 136:1,2,4,11 137:17 141:8 183:1 185:14 198:9 203:11 217:3,6,7 217:12 231:20 233:18 233:19 2:07 133:16 134:1 20 19:14 28:5 136:17 191:18 218:7 20- 98:2 20-year 173:3 200 5:6 244:1,11 20004 2:8 6:7 20005 4:16 20006 5:16 2003 17:5,8 2006 197:19 2008 24:10 2010 20:14 25:21 38:13 2011 20:15 26:23 2013 17:6 2014 236:8 2015 73:14 2016 24:5 2017 129:1 130:16,16 2018 129:15 131:3 2019 17:4,8 202-239-3300 2:9 202-538-8199 6:8 202-642-6329 4:17 2020 188:4,6 2026 1:20 208 203:13 231:22 21 28:5 177:24 202:16 218:7 2100 4:6 212-210-9400 2:18 213 69:10 22 20:13 130:6 185:14 228 5:15 23 21:6 130:10 219:10 235 217:8 24 89:24 130:16 240 10:14 25 21:17 131:2 140:8 147:17 201:16 26 147:17 197:18 26-word 160:21 265 87:22 27 25:21 26:12 28 149:12 206:10 207:2 28203 3:16 29 73:14 106:24 200:9 2A 174:23 2nd 4:6	3 3 38:18 39:13 50:5 89:24 109:8 113:23 115:14 117:4 126:16 135:11 142:18,21 152:2 183:7 183:8,9,20 185:14 187:15,16 188:16,16 198:3 201:16 203:6 204:4,5,11,18 212:22 217:19 220:8 234:13,14 3-D 217:20 3:31 197:3 30,000 98:2 300 3:15 6:6 3000 5:6 302 204:8 30309 3:7 304 204:12,13 306 204:17,21 31 44:9 201:16 220:8 310-318 204:9 32 44:10 33 16:10 203:1,10 207:25 337-TA-1495 1:7 247:2 34 143:21 35 202:25 36 203:10,19 37 203:1 204:5,7,13 207:25 38 50:21 205:23 39 51:16 4 4 5:6 39:14,14 72:8,14,25 73:23 76:12 89:22,23 92:18,18,20 94:1,3,8,11 103:18 135:10 142:18 216:14,18 242:5 4-by-4 137:1 40 52:20 64:18 117:21 401 19:18 402 19:19 404-881-4962 3:8 41 54:20 183:7 185:14 188:16 41-47 183:20 413 73:1 415-243-1000 4:8 415-816-9525 5:8 42 212:22 425 72:11,25 93:6 43 207:9 209:10 211:3 430 72:12 44 55:18 45 182:17 46 203:20 47 183:7 185:14 188:16	212:22 48 56:8 235:13 480P 97:4,6 4900 3:6 4K 10:11 97:7,13,24 182:11 5 5 9:16 90:17 100:24 121:24 124:21 131:3 136:16,20 139:25 140:2 142:21 155:20,20 156:3 156:19,22 161:18,19,24 162:5 184:25 185:15 187:5 223:20,21,22 5:00 238:4 245:1 5:06 246:11 50 204:7,13 500 1:17 52 200:23 203:20 207:15 54 126:13 207:9,15 55 4:6 82:24 187:5 200:23 212:21 555 6:6 56 214:5 57 124:21 198:9 215:20 229:23 58 121:24 216:9 59 44:15 182:17 216:14 6 6 57:20 101:14 113:11 122:1 142:18 143:20 183:1 200:15 60 10:12 124:21 217:6 61 185:15 187:5 202:1 217:18 62 121:25 218:6 63 44:15 64 198:10 220:7 67 185:15 202:1 229:23 68 87:16 88:22 89:2 7 7 10:10 28:2,9 103:19 113:11 126:13 143:20 143:23 178:18 202:1 205:16,21 206:6,8 207:1,13,24 209:25 227:22,23 243:1,16 70 223:17,21,22 701 206:7,7,10 702 207:15,16 703 206:17,19 704 206:25 207:3,8,10 704-444-1433 3:17 706 207:24 208:2	71 92:19 93:24,25 94:16 711 206:19 207:11 713 207:12,14 714 207:3,10 208:3 717 206:12 75 223:21 751 197:3,13,18,25 201:10 213:25 214:6 215:18 216:16 221:10 222:6 229:24 232:14 233:4 235:8 236:24 237:10 238:20 239:25 771-771-8280 5:17 78 110:21 784 68:20 69:5 70:21 81:7,14,19,21 82:4,8,10 90:3 94:1 8 8 11:13 39:14 51:22 52:7 53:3 54:22 58:2 61:1 63:2 65:16 67:6,15 92:17 94:3,17 103:19 113:23 115:13,18 125:16,17,21 126:16 200:15 203:5 233:12 239:25 240:8 242:6 8-by-8 82:19 141:12 800 4:15 810 58:3,8 65:25 822 52:11 826 53:6,8 55:4 827 51:21 53:9 54:22 55:5,7,10 58:9 830 53:11 55:6 840 52:11 846 9:17,18 13:12,19 14:4,21 23:13,16 30:1 877 94:22,22 95:3,12 96:7,12 98:10,25 99:5 99:12 100:2,17 148:1 151:8,20 89 95:21 9 9 12:3 38:9 39:11 44:15 50:14,22 54:15,15 58:16 65:18,21 66:1,23 67:1 68:1 71:14,14,17 83:13 90:22 92:17 94:3 117:22 134:24 142:18 202:15 203:9 204:7,13 204:20 239:25 9:31 1:25 7:2 9:8-13 227:2 90 2:16 910 203:21
---	--	---	--

93 130:17 94 100:14 147:16 94105 4:7 94306 5:7 950 2:7 96 101:13 962 151:6,25 9A 37:13 9B 54:21,21			
--	--	--	--