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# Transcript of Michael Allen Jensen, Ph.D.

**Date:** January 18, 2023

**Case:** Samsung Electronics Co., Ltd., et al. -v- Smart Mobile Technologies, LLC  
(PTAB)

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO., LTD.

Petitioner,

v.

SMART MOBILE TECHNOLOGIES, LLC

Patent Owner,

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Case IPR2022-00766

U.S. Patent No. 8,824,434

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REMOTE DEPOSITION OF

MICHAEL ALLEN JENSEN, PhD

January 18, 2023

Reported by: Susan S. Klinger, RMR-CRR, CSR

Job No. 478281

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January 18, 2023

8:32 a.m.

Remote Deposition of MICHAEL ALLEN JENSEN, PhD,  
held remotely before Susan S. Klinger, a  
Registered Merit Reporter and Certified Realtime  
Reporter of the State of Texas.

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1 P R O C E E D I N G S

2 REMOTE TECHNICIAN: Thank you to everyone  
3 for joining this proceeding, which we anticipate  
4 will run smoothly. Please remember to speak  
5 slowly and do your best not to talk over one  
6 another.

7 Please be aware we are recording this  
8 proceeding for backup purposes. Any off the  
9 record discussions should be had away from the  
10 computer. Please remember to mute your mic for  
11 those conversations. Please have your video  
12 enabled to help the reporter identify who is  
13 speaking.

14 If you are unable to connect with video  
15 and are connecting via phone, please identify  
16 yourself each time before speaking.

17 We will provide a complimentary unedited  
18 recording of this deposition with the purchase of  
19 a transcript. I apologize in advance for any  
20 technical related interruptions, thank you.

21 MICHAEL ALLEN JENSEN, PhD,  
22 having been first duly sworn testified as follows:

1 EXAMINATION

2 BY MR. UDICK:

3 Q Good morning, Dr. Jensen.

4 A Good morning, counsel.

5 Q Could you please state your name and work  
6 address for the record?

7 A Yes. My full name is Michael Allen  
8 Jensen. My work address is 240 Engineering  
9 Building, Brigham Young University, Provo, Utah.

10 Q Great. And I believe from your  
11 declaration you have -- you have been deposed  
12 before; is that correct?

13 A Yes, sir.

14 Q About how many times?

15 A About a half a dozen times.

16 Q So it is not a new process to you, but I  
17 will still go over some of the rules especially in  
18 the Zoom post travel for deposition world.

19 A Okay.

20 Q As the -- as the reporter or as the  
21 technician stated in the read on, one of the  
22 things we really have to do in this world is



1 making sure that we -- we give a big pause between  
2 the questions and answers, so that we're not  
3 speaking over each other. It is very difficult  
4 for the reporter to understand that or to capture  
5 that during the deposition.

6 And that we also make sure that responses  
7 we give are verbal, so head nods don't get  
8 recorded, head shakes don't get recorded, that we  
9 verbalize yes or no.

10 A Okay.

11 Q And we will try to break every hour or so.  
12 Obviously if you need a break before then, just  
13 let me know. The only -- the only thing I will  
14 ask if there is a question pending we -- we finish  
15 up that question before we -- we take the break.

16 A No problem.

17 Q And if I ask a question that you don't  
18 understand, which will inevitably occur today,  
19 just let me know and I will try to rephrase it,  
20 okay?

21 A Of course.

22 Q And if you do answer my question, I am

1 going to assume that you understood it; is that  
2 okay?

3 A Yes, that is fine.

4 Q And just the final wrap-ups, do you  
5 understand that you are under oath today?

6 A I do.

7 Q And are you currently taking any  
8 medication that would affect your ability to give  
9 -- to testify fully and completely today?

10 A No, sir.

11 Q Great. About how many expert reports or  
12 expert declarations have you submitted in  
13 litigation in the past?

14 A Well, as I think you know a number in this  
15 particular case, I think a half a dozen here.  
16 I've basically been deposed -- it is similar to  
17 the number of depositions I've had prior to this  
18 case, so maybe a half a dozen.

19 Q So if we exclude -- if I say SMT for Smart  
20 Mobile Technologies; is that okay?

21 A That is just fine.

22 Q Outside of the SMT matters that you

1 obviously have some declarations on, prior to  
2 that, you have about six expert reports or  
3 declarations; is that correct?

4 A That's approximate. I didn't do a count,  
5 but that would be approximate, yes.

6 Q Great. And then around the same number of  
7 depositions?

8 A Yes, sir.

9 Q Have you ever testified at a trial?

10 A No.

11 Q What about at a hearing?

12 A I gave a tech brief to a judge in one  
13 case.

14 Q Was that along the same or around the same  
15 time as the claim construction hearing?

16 A I don't remember the details of the  
17 timing. It was not a claim construction hearing.  
18 It was scheduled just for me to give the judge a  
19 tech brief.

20 Q Understood. Thank you. So we're going to  
21 spend a lot of time obviously on your declaration  
22 today. Do you have a printed copy of that in

1 front of you?

2 A I do have a printed copy in front of me as  
3 a backup, yes.

4 Q Okay. Would you -- would you like to  
5 utilize that? Is that better than reviewing  
6 something on screen?

7 A Well, I have an electronic, a clean  
8 electronic copy also in front of me, which tends  
9 to be easier for me to navigate. So if you share,  
10 that is another way. I -- I think I prefer to  
11 look at the screen while we're talking. And so I  
12 think that is my preferred format is the one that  
13 I have up in my PDF reader right now.

14 Q Perfect. So what I will do, then, I will  
15 -- we will mark your declaration as the first  
16 exhibit in the deposition. We will put it on  
17 screen to ensure that the copy that we -- that we  
18 all agree on is the same one that we're all  
19 looking at maybe on our own native version. Then  
20 I think it will be free to kind of review the  
21 native version that you have stored on your  
22 computer, the clean copy.

1 Does that work for you?

2 A That is -- that is just fine.

3 MR. UDICK: And so Mr. Lane, do you mind  
4 introducing doc 4 and just screen share for that  
5 one?

6 REMOTE TECHNICIAN: Understood, please  
7 standby.

8 (Exhibit 1 marked.)

9 Q And Mr. Lane if you could provide  
10 Dr. Jensen with control.

11 A It looks like I have control.

12 Q Dr. Jensen, if you would quickly review  
13 that declaration and let me know that it matches  
14 both the declaration that was submitted in this  
15 IPR and the clean version of the declaration that  
16 you have natively on your computer.

17 MR. UDICK: While he's doing that, for the  
18 record this will be Exhibit 1 or Jensen 1, which  
19 is marked as Samsung 1003, or instead of marked --  
20 previously labeled as Samsung 1003.

21 THE WITNESS: So based on just a really  
22 quick review, obviously not detail, this matches

1 what I submitted and what I -- the native copy I  
2 have on my screen.

3 Q Great. And so I will endeavor to point  
4 you to where in the declaration I'm referring,  
5 just obviously so that we can be on the same page.  
6 The only ask I will have is that if you need to  
7 find some additional context that is not kind of  
8 immediately in the next paragraph or the paragraph  
9 before it, that you just let me know that, hey,  
10 I've had to go to this other section.

11 A Okay.

12 Q Does that work?

13 A Yes, that is just fine.

14 Q Great. And so looking at your  
15 declaration, did you write this declaration?

16 A So I did receive assistance from counsel  
17 in some of the drafting work and especially some  
18 of the figures and modifications of figures, but  
19 this declaration -- I edited everything in this  
20 declaration, those parts that I didn't write  
21 myself in the initial draft. And this represents  
22 my opinion or my opinions.

1 Q Were there parts of the initial draft that  
2 you wrote yourself?

3 A Oh, yes.

4 Q What parts were those?

5 A A lot of parts. I don't know that I could  
6 sit here today and say -- we can go through in  
7 detail, but -- but a great number of this -- a  
8 great fraction of this I -- I drafted. And then  
9 other pieces, you know, of course were provided by  
10 counsel after -- after me sharing with them my  
11 opinions and then me having a chance to edit some  
12 of that.

13 So if we want to go through in detail we  
14 can. And I can do my best to recall what I  
15 drafted and what I did not in the original draft.

16 Q Sure. From a broad perspective, do you  
17 recall there being any major sections or -- or  
18 bulk pieces that you remember initially drafting?

19 A Well, obviously all of the stuff about  
20 myself I drafted about my qualifications and my  
21 experience. Things like listing all of the art  
22 upon which I relied, the references upon which I

1     relied, counsel drafted those kinds of things with  
2     me reviewing it and ensuring it matched what I had  
3     done.

4             Obviously the legal standards, level of  
5     ordinary skill in the art was something I  
6     expressed my opinion, but counsel helped to draft  
7     legal standards. Counsel drafted -- you know, I'm  
8     not an expert in legal standards.

9             Some of the overview things was largely  
10    done by -- by them and then as we get into sort of  
11    the -- the kind of the mappings and things, then  
12    it was a lot more collaborative with me writing  
13    sections and them writing sections. So I don't --  
14    that is where it is going to get a little fuzzier  
15    to my recollection of who did what on the original  
16    draft.

17            Q    Sure, understood. That -- that is  
18    helpful, thank you.

19            So you mentioned materials relied on. If  
20    you would, I believe if we look at paragraph 21 of  
21    your -- of your declaration and 22 it lists what I  
22    understand to be the references relied on. Please



1 take a look at that and let me know.

2 A Yeah, paragraph 21, I mean other than, of  
3 course, the '434 patent itself and the prosecution  
4 file, history file, these -- yeah, I've reviewed  
5 this list many times. These are the references  
6 that I relied on.

7 Q Great. And I do note that in 22 it says,  
8 I have also reviewed some cited supporting  
9 references and documentation in forming my  
10 opinions below. The use of the word cited there  
11 suggests to me that there may be further citations  
12 within the declaration that are materials that you  
13 also relied on; is that correct?

14 A Yeah. Again, I would have to go back in  
15 detail on this particular declaration, as you know  
16 I wrote several. And there were times where in  
17 those declarations I would just bring some  
18 supporting reference in which may not appear in  
19 the list.

20 I don't recall in this particular  
21 declaration if there are any of those or not, but  
22 yes, that -- that is a practice that I sometimes,

1 would just bring in a reference to support,  
2 document an opinion that I would cite there  
3 without including it in the list similar to the  
4 list in 21. I just don't recall the details in  
5 this particular one. We would have to take those  
6 one-by-one to ensure that I'm precise on that.

7 Q That is fair. In reality all I wanted to  
8 make sure is that anything that you relied on in  
9 forming your opinion, it is cited in your  
10 declaration either bulleted in the list or cited  
11 somewhere else in the declaration; is that  
12 correct?

13 A Unless I made an error or oversight, that  
14 was absolutely my intention to cite everything  
15 I've relied on.

16 Q And if -- obviously if during the course  
17 of the deposition you realize that an oversight or  
18 something occurred, will you let me know?

19 A I will.

20 Q Great. And in 23, paragraph 23 you  
21 identify that counsel has informed me that the  
22 earliest possible priority date to which the

1 challenged claims of the '434 patent are entitled  
2 is the December 16th, 1996, quote, the critical  
3 date.

4 Do you see that?

5 A Yes, sir.

6 Q And it says, I have therefore used that  
7 critical date in my analysis below; right?

8 A Yes.

9 Q And what do you mean you have used that  
10 critical date in your analysis below?

11 A It is my understanding and counsel has  
12 informed me that art that we might use to assess  
13 the validity of a patent needs to have been in the  
14 public domain and available before that critical  
15 date. So that is -- that is the -- that is the  
16 way I look at that.

17 Q Got it. And 26, paragraph 26 kind of is a  
18 top line of a summary of the conclusions of your  
19 opinions that are in this declaration; is that  
20 correct?

21 A Yes, sir. That is -- that's right, just a  
22 short summary.

1           Q   And in 23 again, counsel has informed me  
2           that I should consider these materials through the  
3           lens of one of ordinary skill in the art related  
4           to the '434 patent at the time of the earliest  
5           possible priority date of the '434.

6                     Do you see that?

7           A   I do.

8           Q   And did you -- did you do that?

9           A   Yes, sir.

10          Q   Did you consider the materials that you  
11          relied on through the lens of one of ordinary  
12          skill in the art related to the '434 patent at the  
13          time of the -- of the critical date?

14          A   Yes, sir, I did.  And elsewhere in my  
15          declaration I have given a definition of one of  
16          ordinary skill in the art.  And I used that as a  
17          lens through which I viewed the patent and the  
18          prior art that I have -- that I have referenced.

19          Q   Perfect.  And that is actually where we're  
20          going in 27.  27 identifies the -- the -- your  
21          definition of person of ordinary skill in the art;  
22          is that correct?

1           A   Yes, sir.

2           Q   And that is a person that would have a  
3 bachelor's degree in electrical engineering,  
4 computer engineering, computer science or related  
5 field and at least two years of experience related  
6 to the design or development of wireless  
7 communication systems or the equivalent. And then  
8 additional graduate education could substitute for  
9 professional experience or the converse; correct?

10          A   Yes, sir.

11          Q   How did you go about determining what you  
12 believe to be the level of ordinary skill in the  
13 art?

14          A   Well, looking at the '434 patent and what  
15 it was teaching, the concepts that it was teaching  
16 and particularly the concepts embodied in the  
17 claims in the '434 patent.

18                 And based on my years of experience  
19 obviously working with graduates in these kinds of  
20 fields and working with those in industry and  
21 having my own company that deals with sort of not  
22 wireless communication systems, but radar systems

1 which are a very close cousin to wireless  
2 communication systems, just my experience on what  
3 kind of background it would take for somebody to  
4 understand the architectures and systems and  
5 capabilities that were defined in the -- in the  
6 claims and in the specification of the '434  
7 patent.

8 Q Regarding the references, the prior art  
9 references that you relied on, did you conduct any  
10 -- any searches for those pieces of prior art?

11 A Yeah, I conducted a lot of searching for  
12 prior art in this case, yes. So again, I don't  
13 recall exactly which references I identified and  
14 which counsel I identified, but yes, I did  
15 searching and identified many of the references  
16 that are listed there.

17 Q But as -- do you -- when I -- so I'm going  
18 to use the term prior art references. And those  
19 are the references that are -- so in 26, Gillig,  
20 Rose, Billström, Byrne and Wong. I'm going to  
21 call this the primary references, the ones that  
22 you base your opinions or you cite primarily for

1 your opinions?

2 A Yes.

3 Q Do you remember if -- if you identified  
4 any of these primary references in your searches?

5 A If I did, the only one would be Billström.  
6 I don't recall the others. I know I did not  
7 identify those, Gillig, Rose and the other ones  
8 listed in paragraph 26.

9 Q And what -- what -- from your  
10 recollection, leads you to believe that Billström  
11 could have been one that you identified?

12 A Just some -- some other work I had been  
13 doing at the time on the kinds of technologies,  
14 GSM and -- and, you know, IP kind of layovers on  
15 GSM and other kinds of cellular technologies that  
16 I've been working on at the time.

17 I had a bunch of references like  
18 Billström, and I just don't recall if that was one  
19 that I brought in from some of that other  
20 experience or if that is one that was found by  
21 counsel. I just don't recall.

22 Q Got it.

1           A   I think that is a typo.  It is Billström,  
2   but it said Billstöm in there, that is a typo.

3           Q   About how many hours do you believe you  
4   spent working on your -- on this declaration?

5           A   That is a great question.  I have not done  
6   an accounting.  Overall in the family of patents  
7   here that I've looked at it has been hundreds of  
8   hours.  I would have to go back and do a detailed  
9   accounting of how many of those hours were devoted  
10   to this particular declaration.  I just don't have  
11   that, I'm sorry.  Tens of hours, but I'm confident  
12   in that, but I'm not confident in going into any  
13   more detail than that.

14          Q   Understood.  And so going to paragraph 30  
15   under claim construction, you indicate that  
16   counsel has informed you and you understand that  
17   the words of the claim should be interpreted as  
18   they would have been interpreted by one of  
19   ordinary skill in the art at the time the  
20   invention was made.  And then you -- you then  
21   reference that the date you will use is the  
22   earliest priority date or the critical date; is



1 that correct?

2 A Yes, sir, that's correct.

3 Q And did you -- did you interpret the --  
4 the words of the claims as counsel instructed or  
5 informed you?

6 A Yes, I did or at least that was -- I tried  
7 as hard as I could to do that. So yes, that was  
8 my intent and that is what I tried to do.

9 Q Great. And so my understanding is that  
10 your -- your opinions are that each of the claims  
11 of the '434 patent are rendered obvious by one or  
12 more of the primary references that you have  
13 identified; is that correct?

14 A Yeah. This summary in paragraph 26 that  
15 is -- that is exactly the summary, that all the  
16 claims are rendered obvious by one or more of the  
17 primary references as you referred to them.

18 Q And your understanding of obviousness  
19 obviously came from counsel; is that correct?

20 A Yes, of course.

21 Q And that is your understanding of the  
22 standard for obviousness is -- is detailed in

1 paragraphs 31 through 44 of your declaration; is  
2 that correct?

3 A Yes.

4 Q And as it says in the top line on 31, that  
5 you're informed by counsel and understand that all  
6 prior art references are to be looked at from the  
7 viewpoint of a person of ordinary skill in the art  
8 at the time of the invention. And that this  
9 viewpoint prevents one from using his or her own  
10 insight or hindsight in deciding whether a claim  
11 is obviousness -- or is obvious; correct?

12 A I see that, yes.

13 Q What methodology did you use to put  
14 yourself in a position of a person of ordinary  
15 skill in the art as of the critical date?

16 A Well, obviously I was involved in the  
17 industry at that time, and prior to that time. So  
18 I sort of knew where the industry was going, I  
19 knew what practitioners in the industry were  
20 doing.

21 And just doing my best to remember sort of  
22 what the state of technology was at that time as

1 well as, of course, reviewing as I reviewed the  
2 references and other literature to remind myself  
3 of the state of technology at that time. What  
4 people would have been trying to do, what the --  
5 where the industry was going. And just put  
6 myself just sort of back in that timeframe as I  
7 viewed the claims and the other parts of the '434  
8 patent as well as the art.

9 Q And in the -- so December 16th, 1996 at  
10 that time what was your -- what were you doing in  
11 1996 professionally?

12 A I was a relatively young professor here in  
13 Brigham Young University of electrical and  
14 computer engineering. I came -- I came roughly  
15 two years prior to that, to the university.

16 Q So at that time you would have already had  
17 your PhD; correct?

18 A Yes, sir. I was completed with my PhD,  
19 yes, sir.

20 Q And it would have been it looks like  
21 approximately two years after your PhD?

22 A That's exactly right.

1 Q Had you spent any time in industry  
2 following -- so strike that.

3 Have you spent any time in industry after  
4 completing any of your degrees before receiving  
5 your PhD?

6 A No. Only -- only as a consultant to  
7 industry, never as a full-time employee of  
8 industry.

9 Q So at the time of the critical date that  
10 is December 16th, 1996, you would be greater --  
11 you would have a greater than ordinary skill of  
12 the art in the time of that invention; is that  
13 correct?

14 A Yeah. With the PhD and the consulting I  
15 had done and with the interactions I had with  
16 industry during my PhD and during my early years,  
17 I would say that I had a greater than ordinary  
18 skill in the art at that time.

19 Q And certainly as a Dean and IEEE fellow,  
20 at the time you were writing the declaration you  
21 far exceeded the level of ordinary skill in the  
22 art. Would that be fair?

1           A Well, I will say I likely exceeded the  
2 level of ordinary skill in the art. And I throw  
3 in there, of course, having had a company now for  
4 more than 20 years, which has helped me even  
5 further better understand the industry, yes.

6           Q And so what methodology did you use to  
7 ensure that you were looking at the art through  
8 the lens of someone with only the ordinary skill  
9 in the art at the time of the invention and not  
10 your greater than ordinary skill in the art?

11          A Yes. I think I already sort of answered  
12 that, but let me -- let me give it again and maybe  
13 be more precise about this.

14               Obviously I teach students, so I know what  
15 a bachelor's degree, say, in electrical or  
16 computer engineering looks like and what their  
17 skills would be. I have employees that work with  
18 me. I understand what they learn in the first two  
19 years of their employment at my company. And of  
20 course, I worked in and interacted with a lot of  
21 people in -- in, you know, the wireless industry  
22 throughout my career.

1           So I have a pretty strong grasp on -- on  
2           what somebody based on my definition of, say, a  
3           bachelor's degree and two years of experience, I  
4           have a pretty firm grasp on what kind of skill  
5           level they have.

6           And so it is always a challenge to put  
7           yourself in those shoes and remember what it feels  
8           like to do that, but I did my best knowing full  
9           well, kind of, what their capabilities were to say  
10          okay, how would I look at this if I were one of  
11          these, you know, had this sort of level of  
12          background.

13          Q    Sure. And you said in your company you  
14          have interacted with individuals that more or less  
15          meet that definition, someone with a Bachelor's  
16          degree and approximately two years of experience  
17          in the industry?

18          A    Yes, sir.

19          Q    What type of tasks are they given in your  
20          company? Strike that.

21                  What are individuals with that level of  
22          experience responsible for?

1           A    At that point they're moving into higher  
2    levels of responsibility or they may not be a  
3    system architect yet at this point.  But you know,  
4    in the first six months they're working on some  
5    sub design.  So as they get to sort of the  
6    two-year point and a demonstrated capability in  
7    just designing some component of the system and  
8    working on that, they're starting to work at a  
9    higher level.

10           Understand maybe they're only designing  
11   some piece based on their expertise, but they're  
12   understanding the architecture into which their  
13   piece will fit and how their design is going to  
14   impact that architecture and the overall  
15   functioning of the system.

16           So they have got to sort of have that  
17   higher level of understanding of how those systems  
18   function rather than relying on a more senior  
19   engineer to help them understand how they need to  
20   do their design in order to ensure it functions  
21   well with the rest of the system.

22           So that is probably the biggest

1 characteristic of somebody at that point in their  
2 career. They've understood the architecture,  
3 they've understood the implications on the system  
4 performance and -- and -- and now they can do  
5 their design within that context.

6 Q So they might be designing a subcomponent,  
7 but understanding that I can't create some  
8 ridiculous power demand that isn't -- isn't  
9 feasible based on the other demands of the rest of  
10 the system as an example; right?

11 A Yes, that -- that -- that is a great kind  
12 of example or maybe the latency in my  
13 communications with the other parts in the system  
14 would destroy really the goal of the system or  
15 something like that, yes.

16 Q Great. And in several of your opinions on  
17 obviousness you combine certain references; is  
18 that correct?

19 A Yes, sir.

20 Q And part of that -- that is what -- the  
21 legal language is a motivation to combine. Does  
22 that sound familiar?



1           A   Yeah, does legal motivation -- I'm sorry,  
2   can you rephrase that, I'm sorry.

3           Q   Sure.  You have heard the term motivation  
4   to combine in regards to legal standards; correct?

5           A   Yes, sir.

6           Q   And that there are some legal standards  
7   associated with showing a motivation to combine  
8   certain references; correct?

9           A   Yes, sir.

10          Q   And these are in your opinions on  
11   obviousness as well; right?

12          A   Yes.  Again, I'm not an expert in all of  
13   the legal, so I always have to refer back to --  
14   but yes, I am aware of that and I use what counsel  
15   told me.

16          Q   Sure.

17          A   I'm aware -- I'm aware of that.  I'm aware  
18   of that requirement, yes, sir.

19          Q   And so for example, paragraph 33 of your  
20   declaration describes that you were informed by  
21   counsel that when a patented invention is a  
22   combination of known elements, the Court must

1 return -- a Court must determine whether there was  
2 an apparent reason to combine the known elements  
3 in the fashion claimed by the patents at issue by  
4 considering the teaching of the prior art  
5 references, the effects of demands known to people  
6 working in the field or present in the marketplace  
7 and the background, knowledge possessed by a  
8 person having the ordinary skill in the art;  
9 correct?

10 A Yes, sir.

11 Q And what was your understanding in apply  
12 -- so strike that.

13 Did you apply that standard in your  
14 analysis of the prior art references?

15 A Yes, I did.

16 Q And so in applying that standard, what was  
17 your understanding of the need for an apparent  
18 reason to combine the known elements in the  
19 fashion claimed by the patent at issue?

20 A So the way I did this was obviously  
21 looking at the patent at issue here at '434 and  
22 what it was teaching. Obviously in the prior art

1 references that I have there were claims where a  
2 reference might not render that obvious by itself  
3 or there might be questions as to whether it  
4 might.

5 And then looking, of course, at what --  
6 the reference I was looking at, would there be  
7 motivation for somebody who is reading that  
8 reference to go off and find other capabilities in  
9 the art that might augment the capabilities or  
10 what is taught in that kind of initial reference.

11 Why would they do that in order to arrive  
12 at sort of the same outcome as the '434 patent in  
13 this particular case had -- had already arrived  
14 at.

15 So I looked even for, maybe even to extend  
16 that farther looking for hooks within or looking  
17 for things said in, say, the original reference  
18 that might motivate somebody to go off and find  
19 other capabilities or other kind of synergistic,  
20 compatible kinds of things that they would work  
21 with it.

22 Q And did you also consider the effects of

1 demands known to people in the field or present in  
2 the marketplace?

3 A Yes, I did. I did consider that.

4 Q Great. And how did you -- so in 34, in  
5 paragraph 34 and I think earlier we mentioned the  
6 word hindsight. And so at the bottom of 34 you --  
7 you were informed by counsel and understand that  
8 it is improper to use hindsight in an obviousness  
9 analysis and that a patent's claim should not be  
10 used as a road map; correct?

11 A Yes, sir.

12 Q How did you go about guarding against  
13 improperly using hindsight in your obviousness  
14 analysis?

15 A Similar to what I discussed previously,  
16 you have got to go back, remind yourself at what  
17 the state of the art was at the time here of the  
18 critical date, 1996, as well as where the industry  
19 was moving at that time so that somebody who was  
20 in the industry, where would that current be  
21 taking them.

22 And just -- just, again, just constantly

1 reminding myself of the state of technology and  
2 the currents and the directions in the industry at  
3 that time. And it is -- yeah, it is a constant  
4 effort to make sure you are reminding yourself of  
5 that as you are applying this kind of analysis.

6 Q Got you. And just so we're on the same  
7 page, so in your definition of a person of  
8 ordinary skill, it is two years of experience  
9 related to the design or development of wireless  
10 communication systems. What -- when you use that,  
11 the term wireless communication systems, what do  
12 you mean there?

13 A Well, I mean, I think it is fairly clear.  
14 I think for this particular case, they would  
15 likely have been in the cellular industry for  
16 wireless communications. The '434 patent though,  
17 of course, as other, like, talks about other  
18 technologies, kind of WiFi, even citizens band  
19 radio, other things, but I think it would have  
20 been most helpful if they would have had some good  
21 exposure to the cellular industry, WiFi industry,  
22 those kind of industries and where they were

1 headed at the time.

2 Q And this is why I ask because I -- I  
3 initially read that as the design or development  
4 of wireless communication systems. Does that mean  
5 the design or development of cellular  
6 communication systems?

7 A Well, I wouldn't want to just limit it to  
8 that, because there is a lot of cross  
9 fertilization in wireless and design.

10 Q Sure.

11 A I look at where I was at that time. I was  
12 designing for WiFi, I was designing for cellular,  
13 I was designing for -- you know, even at one point  
14 earlier than that for pager systems, right.

15 So there is a lot of cross fertilization  
16 of these wireless communication systems, and they  
17 all borrow from each other, because they're all  
18 trying to accomplish similar goals. But the most  
19 spot on I think for really understanding what the  
20 '434 patent was trying to teach, cellular would  
21 have been the most spot on.

22 Q Sure. And I -- you know, in fact I did

1 not mean to attempt to limit the -- that to  
2 cellular. I think my question was a little -- was  
3 I was going for something different, which is when  
4 I read that, it would be the design or development  
5 of. So let's use cellular as an example, and I  
6 agree that it is not limited there in the way you  
7 use it.

8 But would it be the design or development  
9 of a whole cellular communication system, so  
10 everything from the back end to the front end?

11 A Well, I think again, now, I understand  
12 what you are asking. And thank you for the  
13 clarification.

14 I think it would have been atypical for  
15 somebody with two years of experience to have been  
16 the chief architect. As I said, that is  
17 consistent with what I said 10 minutes ago about a  
18 person of ordinary skill in the art.

19 But to be aware of -- to be aware of that  
20 system architecture and to understand how their  
21 may be more -- design piece might fit into that  
22 would be more consistent with what I intended by

1 that person of ordinary skill in the art, because  
2 it would be strange for them to be an entire --  
3 they would be quite advanced to be an entire  
4 architect in the system.

5 Q Got it. And that is why I was unsure,  
6 because the word system to me means, you know, for  
7 -- if we use GSM, for an example, someone that  
8 would be in the design or development of GSM as a  
9 whole, for example. And which seems very  
10 advanced, so that is why I asked the question.

11 A Yeah, yeah, I think -- I think that that  
12 is fair. And obviously as you get to the people  
13 who are the system architects, they have got a lot  
14 more visibility and experience. And of course  
15 those individuals it would -- you would render the  
16 combinations more obvious I would say, so yeah.

17 Q And when -- to what extent does the design  
18 or development of wireless communication systems  
19 involve the design or development of a handset  
20 itself, you know, the entire device?

21 A So certainly to an extent. Wireless  
22 communication systems largely, independent of



1 whether they're a mobile or a more fixed kind of  
2 system, the elements of that are the same, but  
3 there are considerations in a mobile unit  
4 obviously that you need to be aware of, like, the  
5 power consumption and size and weight, all of  
6 those things. How do you package things in more  
7 compactly and dissipate the heat are all of those  
8 considerations.

9 And so a person of ordinary skill in the  
10 art really to -- to grasp maybe some of the  
11 nuanced pieces of how to do the things in the '434  
12 patent in a mobile handset would need to have some  
13 of their experience be in that realm. But the  
14 overall architecture taught in the '434 patent  
15 doesn't really deal with those specifics.

16 And so, you know, could we add a little,  
17 subtract a little from kind of their experience.  
18 Yeah, I think overall I have hit the target pretty  
19 close here.

20 Q Got it. So for example, would a person of  
21 ordinary skill in the art, you know, that  
22 individual be equally able to design a component

1 for the RF communication system. So picking up a  
2 channel scheme and design the audio circuitry for  
3 the decoding circuitry to turn it into voice or to  
4 turn it into audio?

5 A So in my experience, those two things are  
6 closely related. So that would -- that would be  
7 very -- that would not be strange at all for  
8 somebody to have after two years of experience be  
9 able to say, take those two systems and be able to  
10 design them equally well.

11 There might be other pieces that they  
12 would have less familiarity with, just sort of  
13 depending on the architecture, you know, maybe the  
14 microcontroller, the microprocessor, how that is  
15 all coded. They might have a little less  
16 experience there and may not be kind of, you know,  
17 front and center there.

18 So I think maybe at a higher level, at  
19 sort of two years of experience you are going to  
20 have expertise in some -- in some areas and less  
21 in others, but you're hopefully understanding how  
22 the whole system fits together and works together.

1 Q Understood, thank you. And so if we turn  
2 to 36, there is a statement that says, I've been  
3 informed by counsel and understand that  
4 obviousness analysis recognizes that market demand  
5 rather than scientific literature often drives  
6 innovation, and then a motivation to combine  
7 references may be supplied by the direction of the  
8 marketplace.

9 Do you see that?

10 A I do, yes.

11 Q In your analysis of the motivation to  
12 combine the references was -- did you ever  
13 identify that -- that a motivation to combine was  
14 supplied by the direction of the marketplace?

15 A Well, I don't recall if in my declaration  
16 I explicitly identify that. My own experience  
17 says that at -- at the time of the critical date,  
18 I know where the industry was going. I know where  
19 the market was going. I know what people were  
20 trying to be able to do. And I would certainly  
21 say that, I talked about the current of the  
22 marketplace, if you will, of 5 or 10 minutes ago.

1 That was certainly happening at the time of the  
2 critical date.

3 And some of this technology and some of  
4 the motivations to combine and get additional  
5 capabilities certainly would have been driven by  
6 the market, but I don't recall -- I don't recall  
7 putting that into my declaration.

8 Q And do you know why you didn't?

9 A You know, I don't recall exactly. I don't  
10 think it was a highly deliberate decision. I was  
11 rather looking at sort of the technologies and the  
12 fact that you would do this.

13 But I think -- I think to say maybe, maybe  
14 I've over spoken by saying I didn't do it, because  
15 certainly the idea of bringing in additional  
16 capability into a wireless system, you know, when  
17 you have a reference which maybe teaches a basic  
18 functionality and then we enhance it with another  
19 reference, is certainly driven by what I knew the  
20 marketplace was doing at the time.

21 So while I may not have been as explicit  
22 with my language, that is certainly implicit and

1 sort of why it would have made sense to add this  
2 additional capability to these kinds of mobile  
3 devices at the time.

4 Q So is it -- are you saying that there  
5 are -- there are things that you considered that  
6 are not in your report to form your opinion?

7 A I'm sorry to have cut you off.

8 I would say -- I would say it differently.  
9 I would consider it more implicit in my report  
10 than maybe as explicit as it could have been.

11 Q Do you recall any -- any -- any specific  
12 instances where you implicitly use the direction  
13 of the marketplace?

14 A Yes.

15 Q What -- where would those be and what  
16 opinions were those?

17 A Well, again, so maybe we have to get a  
18 little bit more into the detail here of some of  
19 the references, but when you take references like  
20 Gillig or Byrne that I sort of used as sort of a  
21 core reference in -- you know, two different core  
22 references that can stand by themselves and then

1 recognize from the time that Gillig made his  
2 disclosure and invention to the time that the  
3 critical date where was the industry going.

4 Gillig says here is some systems you can  
5 use, here is some -- here is some examples of  
6 things you could use to -- to implement a cellular  
7 system. But by the time of the critical date, the  
8 cellular systems had advanced significantly beyond  
9 what DynaTAC, that Gillig had at his sort of  
10 fingertips at the time of his invention.

11 So the marketplace was taking us into  
12 directions that would have taken a person of  
13 ordinary skill in the art at the time of the  
14 critical date of the '434 patent, the marketplace  
15 was taking everybody towards these enhanced  
16 capabilities, because the demands of the users and  
17 the demands of the marketplace were there driving  
18 that.

19 So there is an example, right. And I  
20 think we can -- we can probably point -- not  
21 probably, we can point to several such examples  
22 of -- of the industry taking us very naturally in

1 a direction at this time.

2 Q So in 43, paragraph 43 you detail a bit  
3 more that the prior art teachings are properly  
4 combined where one of ordinary skill in the art  
5 having the understanding and knowledge reflected  
6 in the prior art and motivated by the general  
7 problem facing the inventor would have been led to  
8 make the combination of elements recited in the  
9 claims; right?

10 A Yes, sir.

11 Q Then the prior art references themselves  
12 or any need or problem known in the field of  
13 endeavor at the time can provide a reason for  
14 combining the elements of the multiple prior art  
15 references; right?

16 A I see that, yes, sir.

17 Q And you applied that standard in forming  
18 your opinions that are in your declaration?

19 A Again, yes. I tried very hard to apply  
20 this. I think I succeeded.

21 Q And so, the next section moves over to the  
22 '434 patent; correct?

1 A That's correct.

2 Q If we would -- do you have a copy of the  
3 '434 patent?

4 A I do.

5 MR. UDICK: So Mr. Lane, actually I don't  
6 think in our folder we have the '434 patent. Can  
7 I drop that into the chat just so we can mark it?

8 REMOTE TECHNICIAN: Yes, sir, that would  
9 work perfectly.

10 Q My apologies, actually we're just under 8  
11 minutes. If you want to take a first bio break of  
12 5 or 10 minutes and that way I can get this going  
13 as well and kind of get two birds with one stone?

14 A Okay, with me.

15 MR. KAZI: Sounds good.

16 Q Great, go off for a quick 10 minutes.

17 A Okay.

18 (Recess, 9:24 to 9:37 a.m.)

19 MR. UDICK: Let's do appearances. So for  
20 the patent owner it is Steven Udick. With me is  
21 Rex Hwang and we're with Skiermont.

22 MR. GRAVES: Philip Graves of Graves &



1 Shaw.

2 MR. KAZI: This is Aamir Kazi with the law  
3 firm of Fish & Richardson here on behalf of  
4 Samsung and also on behalf of the witness. And  
5 here with me is Sangki Park.

6 Q Great. Dr. Jensen, while we're waiting on  
7 the exhibit, I will just ask a couple of other  
8 questions before we get to the '434.

9 A Please.

10 MR. HWANG: Do we need appearances for  
11 other attorneys as well?

12 MR. UDICK: Rex, I already got yours on.

13 MR. HWANG: Okay.

14 Q Dr. Jensen, do you recall when you first  
15 learned about potentially being an expert with  
16 respect to the '434 patent?

17 A I don't recall to be honest. I mean 18,  
18 24 months ago, somewhere in there, 18 months. I  
19 don't remember to be honest.

20 Q Some -- some time ago though?

21 A Yes, it is long enough ago that I have  
22 forgotten.

1 Q Do you remember how you learned about  
2 potentially being an expert witness?

3 A I was contacted by counsel for Samsung.  
4 They asked me some questions to see if I would be  
5 a good match, made some deliberations and got back  
6 to me.

7 Q When they asked you those questions, had  
8 you already agreed to be an expert?

9 A No, no. Initially it was just finding out  
10 about my background a little bit.

11 Q Do you remember what those questions were?

12 A No, sir, I do not.

13 Q And do you know when you were retained to  
14 be the -- to be an expert for Samsung?

15 A I can look at the files. It was somewhere  
16 around -- it looks like it was around October of  
17 2021, so I may have overstated how long ago it  
18 was. Looks like around October of 2021.

19 Q Understood. And so I will ask a quick  
20 question. If you need to refer to the '434 patent  
21 we can do that, but it is already marked in the --  
22 in the -- in the proceeding as Exhibit 1001. And

1 you have it available to you electronically; is  
2 that correct?

3 A I do, yes.

4 Q So in paragraph 47 which is under the  
5 overview of the '434 patent, you -- you state that  
6 based on your knowledge and experience in the  
7 field and your review, it would have been clear to  
8 a POSITA, a person of ordinary skill that the '434  
9 patent describes no more than conventional  
10 technologies in or before 1996.

11 Do you see that?

12 A Yes, sir.

13 Q What do you mean by "conventional  
14 technologies"?

15 A Well, the technologies that were disclosed  
16 in the '434 patent were known in the art, were  
17 known in the industry.

18 Q So when you use the word "convention," you  
19 just mean known in the industry?

20 A Yeah, things that were known in common  
21 use, yes.

22 Q So conventional known and in common use?

1 A Yes, in use, in common use, yes.

2 Q In reviewing the '434 patent and  
3 specifically the claims, did you undertake any  
4 analysis or research to understand how the claim  
5 terms were used in the patent?

6 A Well, when you say research, what do you  
7 mean by research?

8 Q Sure. Did you -- did you review any  
9 materials or did you review any materials to  
10 understand how that term was being used in the  
11 patent?

12 A Well, my understanding as we've already  
13 discussed is that unless something has been  
14 construed, say, by a court to be different that we  
15 apply the plain meaning of the term.

16 So my first answer to that is because I --  
17 I do have expertise in the industry, that the  
18 terms used in the claims I try to apply their  
19 plain meaning as we do in the industry. I think  
20 we also read in my report how counsel has taught  
21 me that -- told me that we can look to the -- to  
22 the specification of the '434 patent if that helps

1 us put the claim terms into context and yes, I did  
2 that as well.

3 Q Great.

4 MR. UDICK: So I will ask Mr. Lane to --  
5 to open doc 24, which is Samsung 1001 and the '434  
6 patent.

7 Q And when he does, Dr. Jensen, can you  
8 review and see if that is consistent with the '434  
9 patent that -- that you analyzed in this case and  
10 the visual copy that you have in front of you?

11 (Exhibit 2 marked.)

12 A Yes, I will. I will check something here.  
13 Yes, this matches the copy that I have and the  
14 copy I submitted as a part of -- as an exhibit to  
15 my report.

16 Q Great. And in columns -- are you fine  
17 with me referring to parts of the patents, both  
18 this and other ones that, that you have used to  
19 refer to column and line numbers generally to  
20 point you to a location?

21 A Yes, sir, I am.

22 Q Great. In columns 11 through 12 of the

1 '434 patent, those are the claims that you  
2 reviewed and analyzed in forming your opinions;  
3 correct?

4 A Yeah. Column 11, starting about line 48  
5 and -- and on, yes, those are the claims.

6 Q Great. So I just want to ask you a  
7 question of how you understood and reviewed the  
8 '434 patent. So in Claim 1 -- so do you  
9 understand when I refer to a limitation I'm  
10 referring to both how you have kind of broken down  
11 and how the patent naturally breaks down different  
12 aspects of the claim?

13 A Yes, I am. I am comfortable with the word  
14 limitation and I think you are correct. That is  
15 how I have done it in my report as well.

16 Q Great. So in column -- or I'm sorry, in  
17 Claim 1 there is a limitation that is wherein the  
18 portable handheld device configured to dynamically  
19 switch between the use of the first or the second  
20 antenna.

21 A Yes.

22 Q Do you see that?

1 A Yes.

2 Q What is -- what is your understanding --  
3 what is the -- strike that.

4 What is the understanding of dynamically  
5 switch that you used in forming your opinions  
6 regarding the '434 patent?

7 A That the -- I think the most basic thing  
8 -- we kind of have to look at what dynamically  
9 means, because we have got switching which already  
10 implies being able to switch between the  
11 modalities. The different, say, radio interfaces  
12 that are disclosed in the -- in this patent claim.

13 So dynamically switch to me would mean  
14 kind of at its basic level being able to switch,  
15 say, in the middle of a communication because  
16 something changed that warrants that switching to  
17 happen.

18 Q And is that the understanding that you  
19 applied in your analysis of -- of whether or not  
20 the claims were obvious in view of the prior art  
21 that you have cited?

22 A Yeah. I think we can go to my report and

1 make sure that I have covered all. I tended to  
2 look at multiple ways you might interpret this.  
3 So you could take -- you could take a viewpoint  
4 that just the ability to switch, say, from one  
5 communication today to a different communication  
6 tomorrow, it might change the radio interface. So  
7 that is -- that is one way to look at it.

8 I think the idea of switching in the  
9 middle of a communication is the one that lends  
10 itself to the most value when we add that -- when  
11 we kind of talk about dynamically switching. So I  
12 would say that is the main one that I applied, but  
13 I think there are other ways that you could -- you  
14 could and I think in my report did sort of  
15 consider options for how that might be done.

16 Q And so are those alternative  
17 understandings of the term?

18 A Yeah, because it is -- it is not crisply  
19 defined what dynamically switched might mean, what  
20 is the timeframe of dynamic. So you could look at  
21 a timeframe of today the channel conditions are  
22 good on one radio interface, tomorrow they're



1 better on another interface, is that dynamic? Is  
2 that dynamically switching? I think you could  
3 argue that.

4 I think a better one is what I said at the  
5 beginning, that you are in the middle of some sort  
6 of a communication, conditions changed and you are  
7 able to switch right in the middle between radio  
8 interfaces to be able to preserve the integrity of  
9 that communication. But I think both definitions  
10 could meet the claim limitation, I just sort of  
11 like that second one better.

12 Q Is there any part of the specification  
13 that you felt informed your understanding of that  
14 term?

15 A I don't recall. We could look in my  
16 report and see if -- I don't recall directly right  
17 now if -- if I -- if I looked -- if I have a  
18 specific reference into the patent on what that  
19 claim limitation or what those words might mean.

20 Q And going to the last limitation it ends  
21 with at least two different wireless protocols.

22 A Yes.

1 Q Do you see that?

2 A Yes, sir, I see that.

3 Q What is the understanding that you use --  
4 so strike that.

5 How did you understand and apply wireless  
6 protocols in your analysis?

7 A Wireless protocols are a well established  
8 term in the art. Here I can say that I recall  
9 that the '434 patent specification also refers  
10 to -- you know, it talks about protocols and it  
11 gives examples of CDMA, TDMA, which are multiple  
12 access protocols that we use in -- in the  
13 industry.

14 So these are well established, these kinds  
15 of protocols. And it can include much more than  
16 multiple access, modulation, coding, a variety of  
17 different things. And so I understood that term  
18 to mean that we have got different radio  
19 interfaces. And either those two different radio  
20 interfaces are more -- each operate on different  
21 protocols or a single wireless interface could be  
22 capable of operating on multiple protocols.

1 Q Understood. In Claim 2 it states that the  
2 handheld wireless device switches between the use  
3 of the first and second antenna in response to a  
4 request from an application.

5 Do you see that?

6 A I do.

7 Q Does that inform at all in any way your  
8 understanding of dynamically switch?

9 A Well, we need to be careful. Certainly in  
10 Claim 2 in the scope of that claim an application  
11 is causing that to happen. Obviously Claim 1  
12 stands on its own and that limitation stands on  
13 its own.

14 So to say it informs how I interpret Claim  
15 1, I want to be a little careful there, because I  
16 think I should analyze Claim 1 on its own. I  
17 think that is what I'm asked to do, without trying  
18 to be informed by Claim 2, which adds a new  
19 limitation and narrows the kind of the combined  
20 claim. But maybe that is not what you were  
21 asking, maybe I should ask you to clarify exactly  
22 what you were asking me.

1           Q I think it was. I think you did grasp the  
2 question, which was did -- you know, does Claim 2  
3 as part of the specification inform your  
4 understanding of the term dynamically switches in  
5 Claim 1?

6           A Only in my analysis of Claim 2.

7           Q Okay. And in Claim 3 -- I'm sorry. What  
8 is your understanding of the term application in  
9 Claim 2?

10          A Essentially a program, some sort of a  
11 decision making program likely encoded in a  
12 computer, a processor, something like this that  
13 can make decisions about the current conditions  
14 and then can do what is best for the communi --  
15 make a decision about what is best for the  
16 communication.

17          Q Understood. Moving on to Claim 3, just so  
18 we're just -- just so we are beginning on the same  
19 page of how you understood the terms.

20                   There is an upload of a first stream of  
21 data and a second antenna for download of a second  
22 stream of data.

1 Do you see that?

2 A Yes, sir.

3 Q So first, what is this consistent with?

4 Two, what is -- what is a stream of data or -- so  
5 strike that.

6 What definition of stream of data did you  
7 understand this to refer to and apply in your  
8 analysis?

9 A Well, so data -- let's just talk about  
10 data for a moment. Data I view as information in  
11 this context, information to be communicated. So  
12 when we talk about a stream of data, a sequential  
13 set of information to be communicated would be my  
14 kind of crisp definition of that.

15 Q And so how -- in that context how is --  
16 what is your understanding of uploading a stream  
17 of data?

18 A So because we're talking about the device,  
19 the mobile device, uploading for that device would  
20 be transmitting that information that -- that  
21 sequence of information, that stream of data to  
22 elsewhere to another user or a base or whatever.

1 Q And so the -- the interpretation of the  
2 limitation that you applied is that you know a  
3 transmitter would upload a first stream of data  
4 where that -- the upload is simply the  
5 transmission?

6 A Yes. Obviously somebody is receiving  
7 that, so you are uploading it to something else,  
8 but yes, from the mobile's perspective, you are  
9 transmitting that to some other node.

10 Q And if you turn Column 3 of the '434  
11 patent --

12 A Sorry, I overshot, please, I'm there.

13 Q It says, data -- so this is at line 7.

14 A Okay.

15 Q Data transferred to a CT/ND over wireless  
16 network comes in an encoded form and must be  
17 decoded at the CT/ND after the data is received?

18 A I see that.

19 Q Do you see that?

20 How is that consistent with your  
21 understanding of data in the claim?

22 A Well, again, it is information that is

1 transferred. So I think that is consistent with  
2 what I applied over the wireless network. I said  
3 data is information that is communicated over in  
4 this case the wireless network.

5 If you are speaking specifically, then,  
6 about encoded and decoded there are a variety of  
7 ways that you can encode and decode. So you know  
8 the -- so that the mobile device how it encodes  
9 its information, the data itself how it puts that  
10 onto a carrier wave and sends that off, transmits  
11 that off during that upload, that is part of the  
12 protocol.

13 Decoding as it receives it, we haven't  
14 talked about download. Again, that is part of the  
15 protocol of how the two nodes decide to -- the  
16 protocol specifies how they're going to  
17 communicate, how they're going to encode  
18 information or decode information.

19 Q And so the opinion that you -- so strike  
20 that.

21 The opinions that you have in your expert  
22 report on upload and -- so on the term upload,

1 your -- your -- so strike that. I told you I  
2 would have a bad question, I got there without  
3 finishing it.

4 Your understanding of the term upload to  
5 be transmitting, is consistent with what you  
6 believe a person of ordinary skill in the art  
7 would recognize the term upload to be in this  
8 patent?

9 A I do.

10 Q Okay. And is there any parts of this  
11 specification or the file history that inform your  
12 understanding of the term upload?

13 A Again, I don't -- I don't -- I don't  
14 recall any -- upload is a fairly straightforward  
15 term in the art. There is not a lot of debate  
16 about what it means. As I read the specification,  
17 that basic term of upload seemed consistent with  
18 data transmission, which is talked about all over  
19 in the specification of the '434 patent.

20 Q And what was the term -- so the term  
21 download in the same -- in the same limitation or  
22 the same claim, what is your understanding of the



1 term download as you applied it in your opinions?

2 A Yeah, it is -- it is just the dual,  
3 because we're talking from a perspective of the  
4 mobile device. The download would be the  
5 reception -- receiving of -- of data from some  
6 other node in the wireless network.

7 Q Just a quick question. I'm hearing some  
8 noises, so it is probably a good time to ask  
9 anyway, other than the Zoom window and PDF, do you  
10 have any applications open?

11 A You know what, I opened my email, that is  
12 the noise you are hearing, I just closed it. I  
13 had opened it during the break, I apologize for  
14 not closing it. It is closed now.

15 Q No worries at all. I understand the --  
16 the habit. Obviously we are all connected.

17 My other question just in a Zoom world  
18 habit and I guarantee you no insinuations, but at  
19 this time, do you have any chat programs or  
20 anything opened up that can communicate with  
21 counsel in any way?

22 A No, sir.

1 Q Great. Again, I apologize for even asking  
2 the question, but it is formalities.

3 A No, I understand, no, I do not. I just  
4 forgot to close it. I'm sorry I forgot to close  
5 it.

6 Q No worries, no worries at all.

7 So in your -- in the understandings of the  
8 terms upload and download used in forming your  
9 opinion, in Claim 3 that would imply then that the  
10 first antenna transmits data while the second  
11 antenna it receives data; correct?

12 A The only -- the only caveat I want to put  
13 on that is let's be careful how we use the word  
14 "while." But to say -- to say in this claim that  
15 one antenna is to -- for uploading of data or  
16 transmitting data and another antenna for  
17 receiving data, yes.

18 Q And how is that consistent with the --  
19 where the first antenna -- so in Claim 1 -- so  
20 strike that.

21 You understand that Claim 2 depends upon  
22 Claim 1; correct?

1           A    I do.

2           Q    And so the first -- so if you look at the  
3 third limitation that is shown on Column 12, the  
4 first antenna is coupled to the transmitter and  
5 receiver.

6                    Do you see that?

7           A    I do.

8           Q    And then the -- and then that also has the  
9 first radio frequency signals are transmitted  
10 using the first antenna?

11          A    Yes.

12          Q    And then the second radio frequency  
13 signals are transmitted using the second antenna;  
14 correct?

15          A    Yes.

16          Q    So how is -- how would a first antenna  
17 upload, therefore transmit, while a second antenna  
18 receive in the claims?

19          A    I'm not sure I understand what you are  
20 asking me.  Maybe you ought to clarify, because I  
21 can give an answer, but I'm not sure I will be  
22 answering what you are really asking me.  You're

1 asking consistency, and I'm not quite sure I get  
2 that.

3 Q Sure. So actually -- so strike that. We  
4 will -- we will move on.

5 So if we move down to Claim 6 --

6 A Okay.

7 Q -- there is a limitation, wherein the  
8 first and second antenna are configured to stream  
9 data simultaneously.

10 Do you see that?

11 A Yes, sir.

12 Q What is your understanding of stream data  
13 simultaneously? So strike that.

14 What is the -- what is the understanding  
15 of -- what is your understanding of the term  
16 stream data simultaneously that you used in  
17 analyzing the claims?

18 A That both of these antennas, the first and  
19 second antenna are configured to or so are capable  
20 of streaming data at the same time.

21 Q And your understanding of streaming is  
22 what?

1           A   As I mentioned, we talked about stream  
2   data. I will reiterate. The idea of a stream of  
3   data is kind of a time sequence of information.  
4   So streaming data is sending that sequence of  
5   information or receiving it.

6           Q   Okay.

7           A   Like stream here is more used as the verb,  
8   so but -- but it is very consistent with the idea  
9   of transmitting it or receiving it.

10          Q   Okay.

11          MR. UDICK: So let's move on to Samsung  
12   Exhibit 1004, which is, Mr. Lane, if you would  
13   pull up doc 5.

14                (Exhibit 3 marked.)

15          MR. KAZI: Counsel, do you mind sending  
16   that as an attachment to the chat as well -- oh,  
17   it is just the patent, okay. Never mind I got  
18   this. You don't need to send this.

19          MR. UDICK: Great.

20          Q   Dr. Jensen, exhibit -- Samsung 1004, my  
21   understanding is this is a Gillig reference that  
22   you have used in your opinions. Can you take a

1 look at that and see if you agree?

2 A Yes, sir. This is the Gillig reference.

3 Q This is what you earlier said is the base  
4 reference that you use for some of your opinions;  
5 correct?

6 A Yes, sir.

7 Q Why did you select this as a base  
8 reference?

9 A This reference includes many of the  
10 limitations that appear in -- in the '434 patent  
11 claims. It discloses obviously the two different  
12 radio interfaces, the two different antennas and  
13 many of the other limitations of the claims are  
14 embodied in this. And so that is why it was  
15 chosen as an important reference.

16 Q So looking at -- so do you have a copy of  
17 this in your -- available digitally as well?

18 A I do, yes, sir.

19 Q So I'm going to cross-reference your --  
20 your declaration a bit.

21 A Okay.

22 Q And so I don't know if you can get both

1 open easily, but it is -- so this may be a heads  
2 up that we might be looking at two different  
3 documents?

4 A Yes, I've got two PDF readers up --

5 Q Great.

6 A -- side-by-side, so I can do that with  
7 little problem.

8 Q Perfect.

9 So beginning at paragraph 51, you have an  
10 overview of the Gillig reference and this is in  
11 your declaration; correct?

12 A Yeah, I'm just scrolling there now, bear  
13 with me. Yes, starting at paragraph 51, yes, sir.

14 Q And in paragraph 52 you indicate that  
15 Gillig describes that the cellular cordless  
16 telephone automatically operates whenever it is in  
17 range of its corresponding cordless base station.  
18 And when it, quote, moves out of range of the  
19 cordless base station, telephone calls may be made  
20 over the cellular radio channels or transferred  
21 from the cordless radio channel to one of the  
22 cellular telephone channels.

1 Do you see that?

2 A Yes, sir, I do.

3 Q Do you have an understanding of how Gillig  
4 transfers from the cordless radio channel to the  
5 cellular telephone channel?

6 A Well, I certainly looked at that in  
7 Gillig. And he has a use model for -- I will  
8 bring it up for everyone to see. He has a flow  
9 diagram, I believe it is this one where he also  
10 has in the specification a discussion of this  
11 where he is -- where he is proposing how that  
12 might be done to transfer from one type of call to  
13 another. One type of radio interface I should say  
14 to the other.

15 Q And -- and the reference -- just for the  
16 record, the reference or the figure that you  
17 pulled up is Figure 8 of Gillig; correct?

18 A Yes, sir.

19 Q And that is a flowchart that is a bit of a  
20 decision tree/flowchart of at least a described  
21 operation of Gillig; correct?

22 A It is, yes. That -- that is a -- yes,



1 that is a good definition, yes.

2 Q And in 710 -- so do you see how some of  
3 these decision blocks are labeled?

4 A Yes.

5 Q 710 includes, has user selected transfer  
6 of cordless to cellular?

7 A Yes.

8 Q Do you see that?

9 A Yes.

10 Q Your understanding of Gillig is that in  
11 Figure 8 the user has to select a transfer of  
12 cordless to cellular to make a transfer from  
13 cordless to cellular; correct?

14 A Well, let me say this: When I first  
15 reviewed this as well as the fairly short  
16 description in the specification, yes, the user  
17 has to select that, but I assumed this -- he is  
18 not very clear about how the user does that  
19 selection.

20 So yes, he definitely has that as part of  
21 the decision tree. What is not clear is exactly  
22 how the user does that selection. In other words,

1 is it a preference that is stored -- he talks  
2 about a key sequence, is that something I do when  
3 I say, okay, I'm willing to roam and -- and -- or  
4 is that something you have to do on the fly, a  
5 little bit unclear.

6 Q And so in paragraph -- in Column 7  
7 beginning at line 17 there is a discussion of  
8 Figure 8; correct?

9 A Yes, sir, that's right, yes.

10 Q And we were just talking about that  
11 decision block 710; correct?

12 A Yes.

13 Q And down at line 33 to 35 or so there is a  
14 decision block to determine if the user has  
15 selected transfer of the cordless call to the  
16 cellular system, e.g., by entering a predetermined  
17 code from the keypad.

18 Do you see that?

19 A Yes, that is what it says.

20 Q And that is consistent with what you had  
21 previously mentioned as something you had seen;  
22 correct?

1 A Yes.

2 Q And so it says, yes, the branch is taken  
3 to block 714 where an attempt is made to transfer  
4 the cordless call to the cellular system. It then  
5 says, assuming the called party has call waiting,  
6 the transfer is attempted by placing another call  
7 on the cellular system and waiting for the called  
8 party to answer.

9 Do you see that?

10 A Yes.

11 Q So is it your understanding that to  
12 complete this, in Figure 8, that the called party  
13 has to have call waiting?

14 A It appears that Gillig would anticipate  
15 that the -- the party has call waiting in his sort  
16 of embodiment here.

17 Q Is that consistent with your understanding  
18 of how Gillig Figure 8 would function?

19 A I hadn't looked specifically at that piece  
20 of -- sort of that call waiting piece. You know,  
21 Gillig making the decision to transfer is -- when  
22 you say is that consistent, I mean really focusing

1 on block 710 I sort of gave my opinion on what  
2 that block might mean.

3 He's not crystal clear on how he  
4 anticipates that to be done. And so I interpret  
5 that to mean you could store that in a register.  
6 I'm willing to have my calls transferred if I get  
7 out of range of cordless to cellular to do that.

8 This call waiting piece is a mechanism he  
9 had for saying this is how it would be done. I'm  
10 not sure that -- that -- yeah, it really impacts  
11 block 710, but CCT is going to try to do that  
12 transfer whether or not the person has call  
13 waiting or not.

14 Q And so something you just said that you  
15 interpret -- so you said he is not crystal clear  
16 on how he anticipates that, which is the block 710  
17 to be done. And so you interpret that to mean  
18 that you could store that in a register.

19 Is there anything in the specification  
20 that you are relying on for that interpretation  
21 and understanding?

22 A The reason I interpreted it that way when

1 I first read it was because he talks about, let me  
2 get, by entering a predetermined code from the  
3 keypad. So I sort of assume, you know, phones of  
4 this generation, you typically had to store your  
5 preferences by having some obscure sequence. We  
6 didn't have menus like we have today, some obscure  
7 sequence on your keypad which would say here is my  
8 preference.

9 Here is how I want this thing to operate,  
10 sort of a way -- a hard way to program your phone,  
11 if you will. So that when I read it, that is the  
12 way I interpreted it.

13 Q And to what extent did you take into  
14 account his, e.g., to determine if the user has  
15 selected to transfer his, e.g., by entering a  
16 predetermined code from the keypad?

17 A Well, again, it is an example, right, e.g.  
18 So here is an example way that you could -- that  
19 the user could specify their preference. There is  
20 obviously another interpretation that the user has  
21 to engage with at that moment.

22 It -- I'm not sure it is particularly

1 important for the analysis in this case, because  
2 the phone is still capable of doing that dynamic  
3 switching, but it certainly is relevant from a  
4 user sort of experience.

5 Q And Gillig is a patent that is 1988;  
6 correct, it was filed?

7 A Yeah, I believe that's right. I'll just  
8 scroll to the top to make sure, but that is my  
9 recollection. Yeah, filed in 1988.

10 Q And it would need -- in 1988, a POSITA  
11 would know that it would need call waiting because  
12 the connections it is creating are circuit  
13 switched; correct?

14 A Yeah. We're talking circuit switch back  
15 in this generation, almost certainly.

16 Q And a circuit switch is essentially -- it  
17 is a -- it is the connection that is consistent;  
18 correct?

19 A That's right. You get -- you get a  
20 circuit resource and it is yours until you change  
21 the connection.

22 Q And so if -- if you wanted to move a

1 conversation you were having, so if I -- if you  
2 and I were speaking by phone, by cordless device  
3 in Gillig, and I wanted to switch from, say,  
4 cordless to cellular, I would have to initiate a  
5 second circuit to you to do so; correct?

6 A Yes.

7 Q And not until I did that, could I -- could  
8 I go to talk to you over the second wireless  
9 medium; correct?

10 A Yeah. So in that scenario that you are  
11 painting, that would be a typical use. And the  
12 other user likely would need to have that call  
13 waiting feature in order to receive the second  
14 call and then be able to connect to the second  
15 call and hang up on the first one. That would  
16 be -- that would be a typical use model for this.

17 Q Right. And that is why the call waiting  
18 is necessary, because if -- if you -- in this  
19 example if you did not have call waiting, and I  
20 tried to initiate a second circuit connection to  
21 you, it wouldn't work; right?

22 A Yeah. If I didn't have call waiting or a

1 functionality possibly similar to what Gillig is  
2 disclosing where I can have these two calls going  
3 on, some -- some capability like that in order --  
4 the other user would have to have that in order  
5 for this to work with that other user. Yeah, I  
6 think -- I think that that is fair. You have got  
7 to have something like that for the other user to  
8 be able to -- to continue to -- for this to work  
9 for them.

10 Q Right. And the underlying infrastructure,  
11 say, cellular or otherwise, would also have to  
12 support this exchange happening between these two  
13 users; correct?

14 A Yeah. I mean, the underlying  
15 infrastructure, of course it has to support it.  
16 It is -- it is not as big of an if, right, because  
17 this infrastructure all exists. You have got the  
18 cell phone connection, you have got the PSTN  
19 connection. That infrastructure was there  
20 throughout the country at this time, so yes, of  
21 course it has to support it, but it did support  
22 it.



1 Q Right. And in Gillig, how is -- so if we  
2 look at, let's say, Figure 2, but of course you're  
3 welcome to review anything else that you might  
4 need to, how does Gillig transmit the audio  
5 wirelessly?

6 A Okay. How detailed of an answer are you  
7 looking for?

8 Q Sure, yeah, that is very fair.

9 So at a very basic level when I -- if I  
10 speak to you my voice is transmitted to the  
11 microphone that is somehow converted to something,  
12 some type of information that is then transmitted  
13 out; correct?

14 A That's correct.

15 Q In Gillig, what is the, you know, the raw  
16 -- what is the raw voice converted to before it is  
17 transmitted?

18 A So microphone in Figure 2 as you referred  
19 to, microphones convert your voice or my voice  
20 into an electrical signal, right. And so that is  
21 routed through the audio switch 150 in Figure 2 of  
22 Gillig and of course there is -- there is control

1 going on. So which route it takes depends on  
2 which interface is currently active and it could  
3 be one or it could be both.

4 And then yes, in the audio circuitry,  
5 either for the cordless or for the cellular or as  
6 I mentioned there is an embodiment with both, then  
7 that is -- that is used to modulate what we call a  
8 carrier that can be transmitted out to the antenna  
9 to create the radio frequency signals. I'm using  
10 that word from the '434 patent, right, that is --  
11 that is how that is done.

12 So does that give you enough detail of --  
13 of what you are asking for?

14 Q Sure, yes. And is it -- is that audio  
15 signal digitized before it is sent out?

16 A It depends upon that audio circuitry and  
17 the cordless transceiver and/or cellular  
18 transceiver and what protocol they're using  
19 whether that is digitized. It also depends on  
20 whether the audio circuitry itself might want to  
21 do some of its processing in digital and then  
22 convert it back to analog if the cordless or

1 cellular protocols are analog standards.

2 So whether or not it is digitized simply  
3 depends on what blocks 110 and 120 do with that  
4 audio data that -- the audio information that it  
5 receives.

6 Q Does the patent specify that one way or  
7 the other?

8 A No, no, I don't -- well, at least I don't  
9 recall anything in Gillig to talk about precisely  
10 what it is doing with that other than it gives us  
11 examples of what blocks 110 and 120 could be.

12 Q And where do you see that?

13 A Let's see, I would have to find it in the  
14 specification. I might find it faster if I just  
15 look at my report really quickly, because I would  
16 have referred to it. Bear with me just a minute.

17 For example, Column 2 so, for example, at  
18 the bottom of Column 2 in Gillig's patent he  
19 refers to a cordless phone model, right.

20 Q Okay.

21 A And then on Column 3 near the top he talks  
22 about the Motorola DynaTAC cellular mobile

1 telephone as examples of -- of -- of kind of  
2 available systems that could -- really probably  
3 chipsets is what we would be talking about, but  
4 regardless radio sets that could be used to  
5 implement those.

6 And that is really the only reference that  
7 I recall in here where he might talk about what  
8 protocols he's going to, you know, he's -- that  
9 might be embodiments of his invention.

10 Q And in 1988, what type of infrastructure  
11 -- what -- so what type of signal was supported by  
12 the infrastructure?

13 A Yeah. So these were analog standards.  
14 And the infrastructure was largely supporting at  
15 that time, maybe exclusively supporting analog  
16 standards. DynaTAC was a frequency modulated amps  
17 standard. The ease of phone, I'm not sure, but  
18 most of that was FM as well. Kind of that --  
19 cordless phone standards were frequency modulated  
20 analog systems as well back in this time.

21 Q Got you. So if we move further into your  
22 declaration, turning to your analysis of Gillig

1 that begins on page 33, paragraph 63. And we  
2 specifically look at paragraph 76 and let me know  
3 when you are there.

4 A I'm there.

5 Q I just had a question. So you -- you  
6 reference here Exhibit 1020 for the StarTAC 3000  
7 Level III Service Manual.

8 Do you see that?

9 A I do.

10 Q And if you look at --

11 MR. UDICK: If we could open doc 18, which  
12 is Exhibit 1020 if you would, Mr. Lane.

13 (Exhibit 4 marked.)

14 Q So this is -- is this the -- so this is  
15 labeled Exhibit 1020 and I believe it is in your  
16 bullet -- your bulleted list of materials  
17 considered on page 13 of your -- of your  
18 declaration. And it shows -- if you turn in your  
19 declaration to that page, it lists a copyright  
20 date, October 24th, 1998, which is also consistent  
21 with a 1998 copyright date on page 2 of Exhibit  
22 1020.

1 Do you see those?

2 A Right, yes, I do.

3 Q You previously indicated that you used a  
4 critical date of December 16th, 1996 and that a  
5 person of skill in the art would review materials  
6 as of that date; right?

7 A Yes.

8 Q And so how -- how would a person of  
9 ordinary skill in the art review a document that  
10 is -- that is dated two years later?

11 A Okay. Of course I appreciate that. Of  
12 course this is -- this copyright is after the  
13 critical date. And I'm using it very much on the  
14 periphery here, because I couldn't find a similar  
15 service manual for the DynaTAC, which was kind of  
16 a predecessor to the StarTAC.

17 But really just used this as a  
18 demonstration that devices back at the time had  
19 multiple processors. So I'm not relying on it to  
20 form an opinion, but using it as corroborating  
21 evidence to support what I already knew that --  
22 and I have other kind of things in my -- in my --

1 in my report that just demonstrate that these  
2 kinds of systems didn't necessarily all rely just  
3 on one processor in order to do their work.

4 Q Didn't you -- if you look to your list of  
5 materials considered again, didn't you cite --  
6 refer to a DynaTAC instruction manual in Exhibit  
7 1023?

8 A Yeah, I did. I'm being slow getting back  
9 to there.

10 Q Okay.

11 A But yes, on page 13, the DynaTAC  
12 instruction manual.

13 Q Okay, I guess I'm confused. I think you  
14 previously testified that you looked to the  
15 StarTAC, because you couldn't find a similar  
16 service manual for the DynaTAC?

17 A Yes.

18 Q Am I speaking about the wrong devices?

19 A No, you are speaking about the wrong --  
20 the right devices. The differentiation here is  
21 the kind of manual that we were -- that I was able  
22 to locate --

1 Q Got it.

2 A The instruction manual doesn't show me any  
3 of the technical detail under-the-hood of what the  
4 system block diagram is. Where the service manual  
5 shows me a service where I can identify  
6 components, in this particular case processors.

7 Q Understood. What was the -- in Gillig  
8 what was the -- the problem that Gillig was  
9 attempting to solve?

10 A So at a very high level this -- this  
11 ability to use multiple interfaces, to offer the  
12 user, you know, these multiple options in a single  
13 device rather than having a separate cellular  
14 device and a cordless device. Let's have a device  
15 that can do both, that can switch between them and  
16 work with both of those interfaces.

17 Q And what were the problems identified that  
18 -- so if we turn to Column 1 of Gillig?

19 A I'm there.

20 Q And if you look I think to -- it talks  
21 about the prior art of Gillig beginning at 10 down  
22 to 28; right?



1 A Yes.

2 Q Limited range and cost of cellular call  
3 was high. And those -- those are kind of the  
4 indicated motivations in the specification;  
5 correct?

6 A That's -- that is what he says here.

7 Q Okay. So if we go to -- if we go to  
8 paragraph 87 of your declaration. And it is -- it  
9 spills between pages 52 and 53?

10 A Correct, yes, I'm there.

11 Q In the last sentence you have a summary.  
12 A POSITA would have understood or found obvious,  
13 and it goes on, at least because Gillig describes  
14 that such a switching operation is performed  
15 automatically based on the portable telephone's  
16 location relative to cordless or cellular base  
17 stations and/or on one or more factors that vary  
18 over time.

19 Do you see that?

20 A I do.

21 Q Where -- where does Gillig describe a  
22 switching operation performed automatically?

1           A Well, we have already talked about Figure  
2           8 and -- and that associated description in the  
3           specification of Figure 8. So if we're talking  
4           about middle of a call kind of dynamic switching  
5           as we discussed before, that would be the  
6           embodiment where -- where he's disclosing that.

7           Q So it is your opinion that the switching  
8           operation is automatic when there is a 710 block  
9           as a user selected transfer of cordless to  
10          cellular?

11          A Yeah. I mean, we're kind of going back  
12          over my testimony. Yes, you know, one way to  
13          interpret that and the way that I did is -- is  
14          that the user has programmed its importance.  
15          Whether or not, for example, he's willing to  
16          switch to cellular. That is stored and now that  
17          the system says, okay, that is stored I'm -- I'm  
18          getting out of range of the cordless base. I'm  
19          transferring to cellular.

20                 And even -- of course, if the user has to  
21          intervene in that decision in realtime it still  
22          doesn't really change that, it doesn't change that

1 capability. It just changes the use model of when  
2 the user has to give their input.

3 Q Sorry, my mouse disappeared for a second.

4 So turning to your analysis with regard to  
5 Claim 6 in Gillig. And if we would look to, say,  
6 6D so page 74, paragraph 117?

7 A Okay, I'm there.

8 Q And this is within the limitations of the  
9 '434 -- strike that.

10 So I'm sorry, let's turn back to Claim  
11 98 -- I'm sorry, Claim 3, paragraph 98?

12 A Okay, I'm there.

13 Q Earlier we talked about upload and  
14 download of the two different devices; correct?

15 A We did.

16 Q And so Claim 3 is use a first antenna for  
17 upload of a first stream of data and a second  
18 antenna for download of a second stream of data;  
19 right?

20 A We have discussed that, yes.

21 Q So in -- in -- in paragraph 98 it says  
22 that, a POSITA would have understood that Gillig's

1 telephone used the antenna, first antenna for  
2 transmitting uploading signals from telephone to a  
3 cordless base station, and then uses the antenna  
4 for receiving from cellular base station when  
5 operating as a cellular; right?

6 A Yes, I do say that.

7 Q Where is the -- if you're on a cellular  
8 connection, don't you have to transmit and receive  
9 for a call?

10 A Well, I mean, a typical call would include  
11 both transmitting and receiving. So I mean, yeah,  
12 the system has capabilities, the cellular has  
13 capability for both transmitting and receiving.

14 Q But are you saying that Gillig discloses  
15 Claim 3, because it would transmit, so upload by  
16 cordless and then at the same time download, so  
17 receive by cellular for the call?

18 A Well, I am not proposing -- I'm not  
19 proposing that that would be a typical usage of  
20 this device. I sort of -- what you are proposing,  
21 if I understand you, would be that the call would  
22 only use half of each interface, the transmit on

1 one and the receive on the other.

2 But all I'm saying here is that one  
3 interface -- each interface is capable of both and  
4 therefore, it meets the limitations of the claim,  
5 because the claim doesn't force me into sort of  
6 the -- drive me to the conclusion that I think you  
7 are asking me about. It just says can I upload a  
8 stream of data on one antenna and download a  
9 stream of -- a stream of data on a different  
10 antenna, and Gillig can.

11 Q So your understanding of Claim 3 is that  
12 Claim 3 is disclosed in the prior art any time  
13 that a first antenna can upload, even if it can  
14 also download. And the second stream or second  
15 antenna could download even though it can also  
16 upload; is that correct?

17 A Yeah. I don't see anything in the claim  
18 that would drive me to a different conclusion.

19 Q Okay. And then in 99 it says that  
20 Gillig's telephone may simultaneously operate as a  
21 cellular telephone and a cordless telephone.

22 Do you see that?

1           A   Yes, I see that.

2           Q   What do you mean? How does it operate  
3 simultaneously?

4           A   The embodiment that Gillig gives is, of  
5 course, three-way calling. So if I'm the user on  
6 Gillig's invention, on Gillig's device, then I can  
7 be connecting one call through the cordless  
8 interface and another call through the cellular  
9 interface. And so now I've got both of them  
10 active at the same time, we're all hearing each  
11 other. The data is coming in and out through  
12 those different interfaces, so it is simultaneous.  
13 That is -- that is the embodiment that Gillig  
14 discloses for that.

15          Q   And how does that -- why is that relevant  
16 under your analysis in Claim 3?

17          A   Because Claim 3 -- just in case -- it --  
18 it is only really relevant if there is a push to  
19 limit Claim 3 to sort of simultaneous. I know the  
20 word doesn't appear there, but if there is a push  
21 to do that, it is important -- I felt important to  
22 me to identify that the device was capable of

1 that.

2 Q So how should I understand this -- you say  
3 if there is a push to do so. How should I  
4 understand whether or not that is -- that is your  
5 interpretation of -- of Gillig or not?

6 A My interpretation of Gillig is what I've  
7 written here. That it is capable, you know, the  
8 first paragraph shows that it is capable of  
9 satisfying the limitations of Claim 3, but you  
10 know and maybe I -- I spoke it too quickly.

11 If we also just talk about the idea that  
12 during that three-way call there are -- there are  
13 times when -- when one of my remote users is  
14 talking. And so because of the three-way call, my  
15 mobile is receiving that and, say, over cordless  
16 and transmitting that, say, over cellular or vice  
17 versa. And so we have this scenario where the  
18 same information is being uploaded and -- and --  
19 and downloaded all in one sort of operation.

20 So I was just trying to identify the  
21 places in Gillig where what he discloses teach  
22 principles that are part -- or limitations that

1 are part of Claim 3. That is really all I was  
2 trying to do.

3 Q Okay. And going down to 102, paragraph  
4 102?

5 A Yes.

6 Q To the extent the term stream of data  
7 involves carrying digital information, you  
8 indicate Gillig would have been easily adapted to  
9 such implementation because Gillig's configuration  
10 reflects a loop to any conventional cordless  
11 telephone transceiver and any commercially  
12 available cellular transceiver; correct?

13 A Yes, that is what I say and that is what  
14 he says.

15 Q Right.

16 We've been going a little bit over --  
17 almost an hour and a half, apologies. Do you want  
18 to do a quick 10 minute?

19 A Yes, sometime, sometime soon, but you know  
20 this is a great time for me.

21 Q I'm at a natural pause, so that would be  
22 just as ideal as anything else?



1 A Okay.

2 MR. UDICK: I think we can go off the  
3 record.

4 (Recess, 10:56 to 11:08 a.m.)

5 Q Dr. Jensen, welcome back. Let's continue  
6 on with Gillig. If we turn to page 78 of your  
7 declaration beginning around paragraph 124 we  
8 begin to get into your analysis of a combination  
9 of references; right?

10 A That's correct.

11 Q And 126 you -- you go in and say that a  
12 POSITA would have been motivated to modify Gillig;  
13 right?

14 A That's correct.

15 Q So what in Gillig would motivate a person  
16 of skill in the art to modify Gillig's telephone  
17 to be a -- to incorporate Rose?

18 A Well, as I say here in paragraph 126,  
19 Gillig is silent as to how you might implement.  
20 He gives an example, but he's otherwise silent as  
21 to what you might use for the blocks that  
22 implement the cordless telephone or the cellular

1 telephone.

2           And so as we talked two hours ago about  
3 how the industry was evolving, so as -- as newer  
4 capabilities came onto the market that would be a  
5 very natural thing for a person of skill to want  
6 to do. So you asked specifically about what in  
7 Gillig, but really it is about the capability in  
8 Gillig and what was happening in the industry that  
9 would drive someone to be motivated to bring in a  
10 better capability into Gillig's invention.

11           Q And where is that opinion in your  
12 declaration?

13           A Again, I think we talked about this right  
14 there at the last sentence. For example, in  
15 paragraph 126 that you identified, therefore, a  
16 POSITA would have been motivated to apply Rose's  
17 newer digital cordless schemes in Gillig's system  
18 to obtain the benefits offered by the digital  
19 cordless features compared to the analog  
20 standards.

21           So that is really what it is.

22           Q And above that you say, Gillig describes

1 it can use, quote, any conventional cordless  
2 telephone transceiver, unquote. And then because  
3 of that general disclosure of Gillig, a POSITA  
4 would have been motivated to investigate, and the  
5 sentence finishes; right?

6 A That's correct, that is what it says.

7 Q And when I asked you earlier about what a  
8 conventional meant in Gillig and it was the  
9 conventional known in a common use technology;  
10 right?

11 A We did talk about that, yes.

12 Q What evidence do you have that Rose's  
13 digital communication figures was known and in  
14 common use at the time of -- that Gillig wrote any  
15 conventional cordless telephone transceiver?

16 A So in fact, that is not what I'm claiming.  
17 We have talked about, you know, what Gillig's  
18 timeframe was earlier. And as things evolved and  
19 the industry evolved, what I'm saying is a POSITA  
20 would have been motivated as these new  
21 technologies were coming out, were clearly  
22 improvements over the prior technology. I'm

1 saying a POSITA would -- POSITA would have been  
2 motivated to go get those and implement those in  
3 sort of Gillig's architecture rather than saying,  
4 oh, that existed at the time of Gillig.

5 Q And that is instead of implementing it in  
6 any conventional cordless telephone transceiver as  
7 Gillig states; right?

8 A Well, conventional at the time of Gillig,  
9 not conventional at the time of the critical date.  
10 So at the time Rose came out and so many other  
11 things that were showing digital being superior to  
12 analog communications, the whole technology space  
13 was improving. So I'm really applying here the  
14 analysis of timeframe of the critical data of the  
15 '434 patent and what had happened leading up to  
16 that point, not just what was conventional at the  
17 time of Gillig.

18 Q And that -- and other than this sentence  
19 at the end of 126, where is that in your report or  
20 in your declaration?

21 A Well, let's -- let's read on. But what  
22 we've got here are what became at that time, not

1 just now, known benefits of -- of using digital,  
2 in this case, cordless protocols over -- over the  
3 analog standard that existed at the time of Gillig  
4 that was commonplace at the time of Gillig, right,  
5 so we can go through those. And paragraph 127 has  
6 some and I think there is more if we keep -- keep  
7 going on. I'm happy to go through those, if you  
8 would like.

9 Q And this is digital cordless, but not  
10 digital cellular; correct, for Rose?

11 A Yes, Rose is a reference that demonstrates  
12 digital cordless, that is correct.

13 Q And in 127, you -- you -- you identify  
14 that -- so a POSITA would have -- that Rose's  
15 teaching, a POSITA would have understood that  
16 Rose's teaching of digital communication figures  
17 would increase security of Gillig's cellular  
18 cordless telephone. That is one example; right?

19 A That is one example of a benefit of  
20 digital over analog standard of cordless phones.

21 Q Security isn't mentioned in -- mentioned  
22 in Gillig at all as a problem or an issue in the

1 art; correct?

2 A I don't recall. I don't want to be too  
3 firm on this, but I don't recall any mention by  
4 Gillig of security.

5 Q So how would a person of skill in the art  
6 having Gillig in their hand develop the plan, a  
7 research plan to -- to develop solutions to the  
8 problem that they have identified associated with  
9 Gillig?

10 A Can you just at least repeat that question  
11 for me?

12 Q Sure. So how would a person -- maybe a  
13 little bit, how would a person of ordinary skill  
14 in the art for this patent go about developing a  
15 research plan to solve having Gillig in hand,  
16 solve -- identify and then solve the problems  
17 that -- that would come to identify in Rose?

18 A Okay. I understand your question. I  
19 think, again, I've already sort of testified, we  
20 talked about market conditions. If you were in  
21 this industry at the time, Rose is just an example  
22 of a whole host -- a whole effort in the industry

1 going towards digital.

2 And if you were -- if you were a POSITA at  
3 the time of, like, Rose and leading up to the  
4 critical date of the '434, the market was driving  
5 everybody towards digital because of the kinds of  
6 features that -- that Rose does talk about as an  
7 example reference, but really the industry was  
8 talking about.

9 So if I'm a POSITA working on this in a  
10 company, say, or to do a start-up, if I am not  
11 aware of this, then I'm probably not a POSITA.  
12 Right, this -- this is happening in the industry,  
13 everyone knew it. And so that is what would  
14 motivate me to go look at, you know, if we're  
15 looking for a good hook into Gillig, we are really  
16 going to need to go through that carefully because  
17 I don't -- I don't have that cited in my report  
18 and don't recall those kind of hooks.

19 Q What -- what modifications would a POSITA  
20 have to make in Gillig to implement Rose?

21 A The essential modification there, I don't  
22 know if this is -- would be comprehensive. I

1 would have to give some considerable thought, but  
2 the main part if we go to Figure 2 of Gillig and  
3 he has got a block -- for example, let me go to  
4 that, so I'm speaking accurately. So he's got  
5 block 110 in Figure 2, which is a cordless  
6 receiver, transmitter and the associated audio  
7 circuitry.

8           So that block being switched out would be  
9 -- I would have to think carefully if there were  
10 anything else, but just switching that block out  
11 with a digital chipset as opposed to an analog  
12 chipset would get you most of the way there if not  
13 all of the way there.

14           Q Would a POSITA have to modify  
15 microcomputer 130 to handle the -- the exchanges  
16 between the cordless receiver and the  
17 microcomputer labeled at 141 through 144?

18           A I can imagine that depending on the  
19 chipset what those control signals that we see,  
20 141 through 145, what those might need to be. But  
21 the general idea of getting some information from  
22 the cordless transceiver 110 and giving



1 information to it and the microcomputer role in  
2 that wouldn't need to change other than just the  
3 specifics of the chipset that you might be using  
4 to do the digital cordless.

5 Q Would there -- would there need to be a  
6 change to the 116 audio circuitry?

7 A Yes, 116, which I view as part of block  
8 110, right. So when I talk about switching out  
9 110, the audio circuitry would almost certainly  
10 change, because it would be then taking that  
11 analog audio signal out of audio switch 150. And  
12 then it would be processing it in a way consistent  
13 with, say, the digital standard of the cordless  
14 transceiver embodied in 112 and 114.

15 Q And would the antenna 118 have to change?

16 A Well, from the standpoint that digital  
17 standards in cordless operated at different  
18 frequencies than the analog standards, then  
19 antenna 118 would need to be designed for the  
20 frequency of the digital standard. So yes, that  
21 would almost certainly need to be changed to  
22 implement Rose in Gillig.

1           Q   So a person of ordinary skill in the art  
2 would have to be able to modify audio circuitry to  
3 go from an analog transmission to a digital  
4 transmission and be able to modify the antenna to  
5 account for the change in wireless frequencies  
6 associated with an analog versus digital protocol;  
7 correct?

8           A   To -- to be -- to be clear, like, the  
9 audio circuitry block 116 would be part of the  
10 chipset that embodies cordless receiver, cordless  
11 transmitter, audio circuitry, prepared to take an  
12 analog audio in and it -- so you could, you could  
13 try to do this on your own.

14           Most practitioners would have gone to a  
15 chipset that was implementing a digital cordless  
16 system in order to do that and wouldn't carve-out  
17 116 and do that on their own, but certainly you  
18 could. And yes, the antenna -- to finish  
19 answering your question, the antenna, a different  
20 antenna would need to be designed or purchased in  
21 order to do that just because of the frequency,  
22 not because of anything else.

1 Q And there would need to be some  
2 modification between the microcomputer 130 and the  
3 item 110 to have those interoperate; correct?

4 A Again, that is going to depend on the  
5 specifics of the control signals that the chipset  
6 is -- uses. They would be very similar to what we  
7 have here, but there might be some -- there might  
8 be some additional ones or different ones. You  
9 would have to look at the chipsets, but that is a  
10 fairly straightforward interface change.

11 Q In what way would that -- the frequency of  
12 the change going from a analog to digital?

13 A The -- at its fundamental level the analog  
14 to digital change does not require a frequency  
15 change, but it de facto requires it. So  
16 technologically it is not -- it is not required,  
17 but what -- the fact that the digital standards  
18 operated on different frequency allocations is  
19 what would force that to happen.

20 There can be some technical reasons we  
21 don't need to get into. Maybe there wasn't enough  
22 bandwidth, for example, at the odd analog

1 frequency to accommodate the wider bandwidth  
2 digital. But other than that, it is basically the  
3 standards that forced us into using different  
4 frequencies as we went from analog to digital.

5 Q Are there any -- are there any  
6 technological differences in different frequencies  
7 that make one band better than another band for,  
8 say, digital communication?

9 A I mean, the challenge with your question  
10 is that it requires a definition of better. So  
11 for example, in a mobile device, higher  
12 frequencies lead to smaller antennas, for most  
13 people, that is better. So it sort of depends on  
14 how you want to define better, but the same  
15 techniques are used to do the design, right. I  
16 mean, it is not -- it is not all of a sudden I  
17 need to learn a new antenna design technique to  
18 change antenna 118.

19 Q Got it. And but what you said before is  
20 the standards kind of force the change, to some  
21 extent is that also the frequency allocations of  
22 -- of different regulating bodies?

1           A Yes, yeah. Of course -- of course the  
2 regulatory bodies have to allocate these kinds of  
3 bands either to be licensed or to be used in a  
4 certain way in an unlicensed way, yes.

5           Q And do you know at the time of Rose -- and  
6 so let's actually introduce Rose.

7           MR. UDICK: Which is doc 6, Mr. Lane, if  
8 you don't mind.

9           REMOTE TECHNICIAN: Understood, please  
10 standby.

11          Q And Dr. Jensen is -- is what we see on the  
12 screen as patent 5,297,203 marked Samsung 1005 the  
13 same Rose that you analyzed in forming your  
14 opinions?

15                   (Exhibit 5 marked.)

16          A Yes, this is the patent we're referring  
17 to, for Rose.

18          Q And Rose was 1993; correct?

19          A It was filed, that's correct, filed in  
20 1993.

21          Q Do you know what -- in 1993 do you know  
22 what frequencies were used for digital

1 transmissions?

2 A Well, at that time and fortunately Rose  
3 helped remind me, but I also did a little  
4 additional research. What was very typical at  
5 that time was this 902 to 928 megahertz, which is  
6 -- was an unlicensed band as long as you operated  
7 in certain ways.

8 Q What are the certain ways?

9 A Well, at the time if you wanted to be  
10 un -- un -- unlicensed and operate, for example,  
11 you had to frequency hop. So it is a kind of a  
12 spread spectrum where you sort of hop your carrier  
13 frequency around within the band.

14 Q And so the -- the modification with Rose  
15 and Gillig would have required frequency hopping  
16 as well; correct?

17 A To use that frequency, that is exactly  
18 right. You would have had to use frequency  
19 hopping. Again, a typical POSITA would have gone  
20 out and acquired a chipset to implement that in  
21 their device, but yes, that would have -- to do a  
22 902 to 928, yes, you would have had to frequency

1 hop.

2 Q The references you rely on in your -- in  
3 forming your opinion, you point to Rose, not to a  
4 specification for a chipset that can do this;  
5 correct?

6 A No, that's correct. I point to Rose as  
7 evidence that this capability was -- was out  
8 there.

9 Q Did you research whether there was any  
10 chipset, any chipset specification or  
11 documentation before the critical date that showed  
12 this functionality?

13 A I recall doing some of that. I don't have  
14 that in my report, so I would have to go re-dig  
15 that up, but I recall looking at chipset  
16 availability for digital at the time, for digital  
17 cordless at the time. I just don't recall the  
18 details.

19 Q So having done that research you  
20 ultimately did not identify anything to -- to put  
21 into your report; correct?

22 A I think the way I would say that is I

1 didn't elect to put what I found into the report.  
2 I don't have anymore detail on that, so that is  
3 really all I can offer you.

4 Q Just to make sure I understand, you  
5 don't -- you don't have a -- a memory or  
6 recollection of why you elected not to put  
7 whatever you found into the report?

8 A I do not, that is correct. I do not have  
9 a recollection of why what I found is not in the  
10 report.

11 Q Okay.

12 A I should add, however, that even if a  
13 user, you know, someone designing a device did not  
14 have access to a chipset, that the technology was  
15 known. So it would certainly take more work to  
16 implement that in a Gillig device, but it doesn't  
17 prevent implementation of that in the Gillig  
18 device.

19 Q One would have to be able to design a  
20 chipset themselves; right?

21 A Design the system, yeah. I mean, you  
22 probably wouldn't create a chipset under those



1 circumstances unless you were really big volumes,  
2 but there is lots of wireless devices that were  
3 not done just with a chipset. That would have  
4 been a -- the easiest way to make it happen. It  
5 is not the only way to make it happen.

6 Q So turning to 1 -- to paragraph 129, it is  
7 a paragraph that in the latter half of it it says,  
8 a POSITA would have appreciated that the  
9 Gillig-Rose combination does not change the  
10 hallmark aspect of either reference and then it  
11 goes on.

12 Do you see that?

13 A I do.

14 Q It says, Gillig's cellular cordless  
15 telephone architecture and schemes would remain  
16 unchanged.

17 And that is referring to block 120 in  
18 Figure 2; is that correct?

19 A Well, yes, generally speaking. I mean, it  
20 is all part of the system, but yes, that would  
21 need to change.

22 Q So I guess, when you say cellular cordless

1 telephone architecture, what do you mean there,  
2 because that -- it kind of looks like maybe it is  
3 both or I can't tell what cellular cordless  
4 telephone architecture?

5 A That is what Gillig refers to his overall  
6 device. He calls it a cellular cordless  
7 telephone. And so -- well, so it is actually  
8 broader than what you said. The architecture here  
9 in Figure 2 doesn't have to change at all. It is  
10 what it is -- you are going to swap out the block  
11 110 for a different set, but the architecture  
12 remains the same.

13 Q And what do you mean by architecture  
14 there, because that was -- frankly to me that  
15 would sound like a architecture change, so what do  
16 you mean when you say architecture?

17 A So Figure 2 I would call an architecture  
18 design. It is a high level block diagram of what  
19 is going on. So there is nothing in Gillig that  
20 says that block 110 has to be an analog radio that  
21 handles only analog signals. So the architecture  
22 really it doesn't change at all. It is just I'm

1 going to change what block 110 -- how it does its  
2 job.

3 Q Okay. What do you -- so back to that  
4 sentence, appreciated that the Gillig-Rose  
5 combination does not change the hallmark aspects  
6 of either reference. What is -- what are the  
7 hallmark aspects of either reference?

8 A Well, without trying to be comprehensive,  
9 the hallmark aspects, Gillig is obviously trying  
10 to solve a problem giving us this architecture of  
11 this combined mobile device with these combined  
12 radio interfaces that can be -- can work together  
13 in this sort of seamless way. Rose coming in and  
14 saying here are some advantages of going from an  
15 analog radio to a digital radio. All of those are  
16 preserved in the combination.

17 Q Why would a person of skill in the art  
18 have identified a entirely analog device to make a  
19 at least partially digital device?

20 A Well, let's -- let's -- let's -- I want to  
21 back up a little bit.

22 Gillig doesn't disclose and say this is an

1 analog device. Gillig disclose an architecture  
2 for trying to get the best of two worlds, a  
3 cordless and a cellular world. At the time he  
4 cites examples that you might use to implement 110  
5 and 120 as analog radios, but he is not proposing  
6 an analog system.

7 Q Digital systems exist at the time of  
8 Gillig?

9 A Well, we talked about this. I don't want  
10 to say they didn't exist, but they -- they weren't  
11 -- they weren't sort of the common thing like the  
12 DynaTAC for cellular. And, you know, I think a  
13 Phillips or something like that for the -- for the  
14 cordless. I can't remember as well on that.

15 Those were the -- the commonly used ---  
16 whether I could say a digital existed or not, I'm  
17 not competent to express an opinion on that, but  
18 those things were available by the critical date  
19 as evidenced by Rose.

20 Q So in 130 at the end -- at the end of it,  
21 so again, it would have been obvious to a POSITA  
22 that Gillig's cellular cordless telephone would be

1 readily modified to implement Rose's digital  
2 cordless connection schemes, e.g., transmitting,  
3 receiving stream of digital voice data.

4           What does it mean by -- why do you say  
5 digital voice data there?

6           A That is what Rose's invention discloses.  
7 I mean, it is a cordless phone, so that is -- that  
8 is what it discloses. I mean, maybe I need more  
9 clarity on what you are asking.

10          Q No, that answers. I just wasn't sure what  
11 you meant there.

12          A Okay.

13          Q And the -- the digital voice data of -- of  
14 Rose is encrypted; correct?

15          A I don't recall. It certainly enables --  
16 once we go to digital it enables encryption, but I  
17 need to go back to the reference to ensure that  
18 he's disclosing encryption. I just don't recall.  
19 There -- I mean, he talks about security, but  
20 there is -- there is inherent security and then  
21 there is layers of security like encryption. And  
22 I just don't recall all that -- what -- what he's

1 talked about.

2 Q So I'm confused, because you stated one of  
3 the motivations to combine for a POSITA to look in  
4 relationship to Rose is to have a digital cordless  
5 system that allows utilizing encryption techniques  
6 but you're not sure if Rose discloses those?

7 A I don't recall. I know I stated it is in  
8 my report. I just don't recall exactly where Rose  
9 talks about that, but -- but -- but just by going  
10 to digital you -- you increase security.

11 Encryption adds another layer of security. That  
12 is one of the benefits of going to digital is  
13 enhanced security. The ability -- the opportunity  
14 to do encryption being a very obvious one.

15 There is other advantages as well and that  
16 is one of the advantages that I cite in my report.  
17 I just don't recall where in Rose it talks about  
18 that. We can go look if...

19 Q And then in 128 you identify another  
20 benefit from incorporating Rose's channel  
21 monitoring techniques that it would have been --  
22 apply Rose's teachings of intermixing digital

1 command data into the stream of digital voice data  
2 to Gillig's cell phone as a means by which  
3 transmitted digital command data is received and  
4 captured and replaced with a quiet sequence so as  
5 to prevent the command data from causing an  
6 otherwise undesirable audio sound to be heard by  
7 the user.

8 Do you see that?

9 A Yes.

10 Q Isn't the -- the command data a problem  
11 with digital audio to begin with?

12 A Clarify -- can you please clarify?

13 Q So in an analog system, is there digital  
14 command data?

15 A In an analog system there is not -- there  
16 is not usually transmitted digital command data,  
17 control data. That would be -- that would be odd  
18 to have that.

19 Q So there would be no reason to look to  
20 Rose to solve -- to quiet audible noise coming  
21 from command data in an analog system; correct?

22 A Well, that doesn't mean that an analog

1 handset and base don't have to handshake. And so  
2 exactly how you are going to handshake, for  
3 example, can be a problem. If you say so what I  
4 might do is I might send some signals some --  
5 some -- some exchange back and forth. To do that  
6 handshaking you don't know it because I've muted  
7 your speaker, turned off your speaker but that --  
8 it is happening very fast, but that is happening  
9 behind the scenes.

10 Now when I go to a digital, I can organize  
11 my data in such a way that I have got command bits  
12 or symbols intermixed with voice mixer symbols.  
13 And the protocol tells the handset and the base  
14 how they're going to interpret those.

15 So, so --

16 Q Sure, but the -- but the issue of command  
17 data causing undesirable audio sound isn't an  
18 issue in an analog system; correct?

19 A No, it -- it -- it could be. It is. I  
20 mean, if you're sending it over the same wireless  
21 interface because you need that command data, that  
22 handshaking, then it is -- if that were there to



1 end up in your speaker then you might hear that.  
2 So that can be a problem that is avoided by sort  
3 of a digital structure, because you can deal with  
4 it in a more of a protocol way rather than just  
5 muting or turning off the speaker during those --  
6 those periods.

7 Q How would there be a -- how would there be  
8 a digital command data being transmitted in an  
9 analog system?

10 A I didn't -- I didn't say digital.

11 Q Okay.

12 A I didn't say digital command information.  
13 There still has to be a handshake. As an example,  
14 we've got a set of frequencies that we can use.  
15 Your phone, here is my phone next door and says,  
16 hey, we're going to operate on this frequency  
17 because next door they're operating on one. We  
18 don't want to interfere with them, right, and we  
19 don't want to hear them.

20 So there is something where the handset  
21 and the base have got to coordinate, a little bit  
22 of a handshake. It is not likely to be digital.

1 Like I said, that would be odd, but that doesn't  
2 mean if that were piped through your speaker you  
3 would hear it.

4 Q Got it. In an analog switch system, if  
5 you drop the connection, you are pretty aware of  
6 it; right?

7 A I'm sorry, I was distracted because I was  
8 reading something, please say it again.

9 Q In an analog -- no, no worries. In an  
10 analog switch system, if you lose the circuit you  
11 are pretty -- it is pretty obvious to the users;  
12 right?

13 A Yeah. If you lose -- if it is a circuit  
14 switched system, which can be analog or digital,  
15 but a circuit switched system you lose a circuit,  
16 the call is gone.

17 Q And so the -- so you indicate later in 128  
18 a POSITA would be motivated to modify Gillig to  
19 implement a command data protocol incorporating  
20 positive acknowledgment with retransmission  
21 technologies for the purposes or purpose of  
22 ensuring that each transmitted command is

1 acknowledged when received and if lost or damaged  
2 is repeated until acknowledged all before further  
3 commands are transmitted.

4 Do you see that?

5 A I do.

6 Q Is there -- what command data exists in  
7 Gillig before it is modified by Rose?

8 A So Gillig does not -- command data --  
9 let's be precise.

10 Gillig does talk about command or control  
11 data between, say, the radio and the microphone  
12 here, but he's silent is my recollection on the  
13 command data that might need to exist between the  
14 base station and the handset, the cordless  
15 handset. So I don't recall any -- any -- anything  
16 about that. So I think that answered your  
17 question.

18 Q Yeah. And so if -- if -- if a command  
19 isn't acknowledged or received in Gillig, it is  
20 aware because the connection is not setup;  
21 correct?

22 A It could be, but if for example, the base

1 station is trying to negotiate a frequency with  
2 the handset, but there is no acknowledgment  
3 opportunity, then the base station could just  
4 continue and the handset is not receiving and so  
5 now we have a problem. Yes, you as a user would  
6 become aware, very, very quickly that something is  
7 wrong. Whether or not the system is aware, is a  
8 different -- is a different story.

9 Q So as a user -- I'm sorry, my apologies.

10 A If there is no acknowledgment is what I  
11 was saying and I'm done.

12 Q So as far as a user is concerned, that  
13 problem would be manifest to the user without any  
14 further input. They just simply couldn't make a  
15 call; correct?

16 A Yes, there would be silence, yes.

17 Q Would there be any -- would there be any  
18 changes to the requirements of a -- of a handset  
19 that moves from analog to digital in terms of  
20 processing capa -- processing power?

21 A You know, generally speaking digital  
22 systems require more processing power because

1 there is signal processing that has to be done.  
2 So from that perspective, generally, that -- the  
3 answer would be yes. There is -- there is  
4 additional processing done for a digital system to  
5 get these benefits.

6 Q And would that additional processing power  
7 require additional stored energy, battery capacity  
8 or the like?

9 A It -- it could. Let's not forget though  
10 that analog systems have their own, just they do  
11 it in a different way. So it may not be  
12 processing like a digital processor, but they have  
13 their own set of circuitry. Often we find as we  
14 go to digital we can consume less power overall,  
15 so that is not -- that is certainly not a blanket  
16 statement we can conclude that, like, battery  
17 power would be impacted.

18 Q Where does the -- how -- how are you --  
19 when going to digital, how can less power be  
20 consumed overall, what changes?

21 A Let's take the most obvious one. Because  
22 digital is much more immune to noise, then for

1 example, I may be able to on my radio frequency  
2 transmit amplifier put those at a lower  
3 amplification level which is one of the largest  
4 consumers of power in -- in these radios  
5 especially at that time.

6 So the ability to -- yes, maybe I'm making  
7 a tradeoff where I have to put in some increased  
8 processing power here, but then I get to do  
9 something more optimal and somewhere else in the  
10 system. So you have to look at that holistically  
11 to come to a conclusion about overall power  
12 consumption of the device. And -- and that is --  
13 yeah, so a blanket statement is -- is very  
14 difficult to make there.

15 Q Okay. So the next we move on. And the  
16 Gillig device that is modified by Rose has to  
17 again be modified now by Billström and that begins  
18 on paragraph 131; correct?

19 A Correct.

20 Q And that is to modify Gillig-Rose --  
21 Gillig-Rose's cellular cordless telephone based on  
22 Billström's suggestion, the handheld portable

1 telephones transmit and receive packet data as  
2 well as analog signals.

3 Do you see that?

4 A Yes, I do.

5 Q What is packet data?

6 A Well, packet data is a fairly  
7 well-established term in the art. We're now -- as  
8 soon as we go to packets, our data is digital and  
9 packet data is a way for us to assemble portions  
10 of that information, of that data together with a  
11 packet header and then transmit that packet across  
12 the -- the channel.

13 Q And so it is -- it is using the IP or the  
14 internet protocol in the cellular system thereby  
15 achieving several apparent benefits; right? What  
16 is internet protocol?

17 A Well, internet protocol is actually a kind  
18 of a suite of subprotocols that define a way for  
19 packet data to be transmitted. So it is -- it is  
20 essentially a standard, a protocol of a way that  
21 all the nodes will understand how to communicate  
22 packet data.

1 Q And that is based on the OSI model;  
2 correct?

3 A Yeah. The OSI model includes that. I  
4 think the OSI model -- I mean TCP/IP --

5 Q Right.

6 A -- plugs into that.

7 Q Yes. Hopefully I asked that question.

8 A That is fine, yeah.

9 Q And here you identify Billström digital  
10 cellular technologies, e.g., TDMA schemes taught  
11 by Billström; right?

12 A Yes, Billström focuses on TDMA schemes,  
13 yes.

14 Q What cellular technologies were using TDMA  
15 at the time?

16 A Well, GSM for sure. I think DCS, some of  
17 the other standards were using FDMA. So I know of  
18 GSM and I'm pretty sure DCS were TDMA standards.

19 Q And carriers were -- were largely either  
20 GSM or CDMA based; right?

21 A Yeah, CDMA or some FDMA, yes. Essentially  
22 carriers would have a technology was largely



1 the --

2 Q Basically -- well, I guess it was the  
3 AT&T/Sprint divide basically; right?

4 A Yeah, I don't recall the details, but yes.

5 Q You -- you can get one device, but you  
6 could never use it on the other carrier because  
7 one was TDMA and one was CDMA?

8 A No.

9 Q So is the modification of Billström to  
10 packetize the voice transmission?

11 A Well, Billström -- Billström is -- is  
12 creating -- we talked about these normal  
13 enhancements that were happening. So Billström is  
14 to create and move to the next phase of -- of --  
15 of certain cellular capability. Voice data, sure;  
16 broader sets of data, yes. So it certainly  
17 brought a whole new capability to -- through the  
18 cellular industry.

19 Q So what is it about Billström's packet  
20 data that would -- would -- would make a person of  
21 ordinary skill in the art decide to combine  
22 Billström in that functionality with Gillig and

1 Rose?

2 A So -- so I mean, first of all, for most of  
3 these claims except for Claim 8, we don't really  
4 need the packet data capability of Billström. And  
5 so just the -- the digital cellular capability  
6 similar to what we talked about for cordless  
7 phones was already an improvement, right. And we  
8 talked about several of those, and I think there  
9 is more in my report for the cellular.

10 But then the packet data, of course,  
11 that -- that takes us one step further. And  
12 packet data allows us to take advantage of -- of  
13 kind of wired networks and all that internet  
14 protocol brought to us. So that would -- that is  
15 kind of the next level of enhancement, both of  
16 them are taught in Billström.

17 Q So in modifying the Rose/Gillig  
18 combination, what would -- what would a person of  
19 ordinary skill in the art have to change about  
20 Gillig?

21 A We can go back to Figure 2 in Gillig. My  
22 answers are very similar to what I gave in

1 response to the cordless swap out.

2 That the main thing, of course, is block  
3 120 would now need to -- to change. Implemented  
4 in the digital cellular and to do Billström with  
5 packet capability that would necessarily  
6 similarly, although in this case it is not as --  
7 as forced that the antenna 128 would have to  
8 change, because in the cellular standards there  
9 was overlap between analog and digital  
10 communications over the same bands where we didn't  
11 have that really cordless, but they also opened up  
12 additional bands.

13 So the antenna may have to be more  
14 functional. It is just depending on what you  
15 chose to -- what frequencies you chose to -- to --  
16 to do. And then, of course, the microcomputer as  
17 we already talked about, that would need to  
18 recognize the control exchanges with that cellular  
19 system.

20 Q And when you speak to block 120, it is a  
21 change to each one of those elements within block  
22 120; correct?

1           A   Yeah.  I refer to 120 because it includes  
2 boxes 122, 124 and 126.  Those -- those all need  
3 to change.

4           Q   In Gillig's cellular receiver, was there  
5 any modulation scheme -- strike that.

6                   What antenna requirements did Gillig's  
7 modulation scheme require for cellular?

8           A   Gillig is, as I recall, silent as to what  
9 the capabilities of antenna 128 would need to be  
10 for cellular.  So that would depend -- the answer  
11 to your question would depend entirely upon what  
12 if, for example, we were using an analog  
13 capability for 120 that existed at the time of  
14 Gillig, it would depend entirely upon what that --  
15 what that capability would be.  AMPS would tell  
16 us.

17                   And it is not just -- they're using the  
18 AMPS standard like the DynaTAC did, which is one  
19 that, as a reminder, Gillig referenced as an  
20 option, then using the AMP standard would dictate  
21 the capabilities of that antenna.

22                   Let's be crystal clear that it would not

1 be dictated specifically by the bandwidth of the  
2 phone call. It would be dictated by the bandwidth  
3 capabilities needed to support the AMP standard  
4 where you can have multiple frequencies that you  
5 have to operate over in order to negotiate with  
6 the base station which frequency you're going to  
7 actually use.

8 Q Billström -- when was Billström, when  
9 was -- what was the date of Billström's patent?  
10 When was the patent issued, so strike all of that.

11 When was -- when was the Billström patent  
12 issued?

13 A The patent issue was December 31st, 1996.

14 Q Is that before or after the critical date  
15 that you relied on in forming your opinions?

16 A It is two weeks later.

17 Q Okay. Were there any references that you  
18 looked at instead of Billström that you analyzed  
19 and then realized those other references did not  
20 fill the requirements that you identified that  
21 Billström did?

22 A I don't have a clear enough memory of all

1 of that to give you a good answer to that  
2 question.

3 Q What do you remember about that?

4 A Again, all of this -- the entirety of the  
5 -- of the set of patents that I considered in this  
6 case I explored a lot of references. So to now  
7 recall what I may have looked at in -- in  
8 specifically for the '434, I just -- I'm sorry, I  
9 just -- I just can't do that.

10 Q Okay.

11 MR. UDICK: So let's, Mr. Lane, if we  
12 could open doc 7.

13 Q We have mentioned Billström a bit. And my  
14 apologies I didn't introduce it, but I have doc 6  
15 is or I'm sorry, doc 7 is Exhibit 1006, in the --  
16 in the IPR labeled Samsung 1006.

17 (Exhibit 6 marked.)

18 Q And in the abstract and I believe in your  
19 specification or in your declaration -- my  
20 apologies. Before I claim that, let me make sure.

21 So if we look at paragraph 133. And if we  
22 are -- as it spills from page 84 to 85, you state

1 that the Gillig-Rose telephone would benefit from  
2 Billström's teachings such that the telephone in  
3 Gillig-Rose-Billström would, quote, provided an  
4 integrated system concept that provides new packet  
5 data services in a closely integrated way  
6 utilizing the current TDMA cellular infrastructure  
7 to the extent possible consistent with packet data  
8 functional and performance requirements.

9 Do you see that?

10 A Yes.

11 Q And it cites to Exhibit 1006, Column 3,  
12 line 62 to 67?

13 A Yes, I see that.

14 Q What does it mean to the extent possible?  
15 It says, utilizing the current TDMA cellular  
16 structure to the extent possible consistent with  
17 packet data functional and performance  
18 requirements?

19 A Well, we have to ask the inventors  
20 exactly, but my interpretation of this is we had  
21 all this infrastructure out there, GSM, TDMA  
22 infrastructure that -- that was out there. Now,

1 how can we introduce packet data on top of that,  
2 that is -- that doesn't require major changes to  
3 that cellular infrastructure. Hopefully use it as  
4 it is, but we're still offering the kind of  
5 performance that a packet data network requires,  
6 so simply that.

7 Q Did the -- did the current TDMA cellular  
8 infrastructure at the time of the critical date,  
9 were you able -- could you introduce packet data  
10 without major changes to the cellular  
11 infrastructure?

12 A I would need to go back and review dates.  
13 I don't think I have that documented even though I  
14 know I have researched it in the past of when  
15 things like GPRS, a generalized packet radio  
16 service was introduced on to GSM. I need to go be  
17 confident in those dates before I answer  
18 definitively your question.

19 Q And one change associated is, and you  
20 mentioned this in your declaration, is a change  
21 from the circuit switch consistent connection to a  
22 packet switch connectionless exchange; correct?



1           A Yes, I mean, that is what packet data does  
2 that Billström discloses that, yes.

3           Q So certainly the -- the underlying  
4 cellular infrastructure, you know, not on the  
5 mobile device it would need to accommodate that;  
6 correct?

7           A The -- the base station infrastructure  
8 needs to have some sort of a layer capable of  
9 doing packet data and packet switching.

10          Q And I haven't researched it either, but if  
11 the underlying cellular infrastructure couldn't  
12 handle packet data, would a POSITA be motivated to  
13 modify a cellular device to use packet data over  
14 cellular?

15          A Well, so we need to be a little cautious  
16 here, because the industry was certainly going  
17 this way. The appetite was to offer more and more  
18 digital services, you know, that the Gillig  
19 invention modified, say, with this capability, we  
20 have to look very carefully at the timeframe of  
21 when the infrastructure would facilitate that.  
22 But that kind of a capability of having digital,

1 you know, packet data was being developed at the  
2 time. The '434 patent has the same kind of  
3 problem. It would need that infrastructure in  
4 order to happen.

5 So I get that your question is about  
6 motivation, but this is exactly where the industry  
7 was going. So that would motivate a POSITA to be  
8 looking at these kinds of enhancements.

9 Q Looking at Billström, what part of the  
10 disclosures in Billström describes implementing  
11 packet data on a mobile device?

12 A I mean, do you want me to specifically --  
13 let me ask this. Do you want me to specifically  
14 go in and find some references, when you say which  
15 parts?

16 Q Let me see if I can kind of hone the  
17 question for you. I guess maybe the better way to  
18 put it is, is what aspects of Billström would a  
19 POSITA grab on to and implement into the mobile  
20 device?

21 A So as soon as the mobile device has got to  
22 work with this packet radio infrastructure, so as

1 soon as you want that capability, then you really  
2 have to find the machinery to do kind of all of  
3 it. So I don't know -- so I'm not -- I'm not sure  
4 beyond that how to answer your question.

5 Q Does -- does Billström disclose how to  
6 packetize data for transmission over a cellular  
7 network?

8 A I -- just to be confident -- I don't  
9 recall any and I'm not seeing here quickly  
10 anything about the actual packetization. That  
11 certainly would have been known in the art.

12 I see some things about some of the frame  
13 structure in here, so there is certainly some  
14 discussion of frame structure, which would make up  
15 packets. But I don't think that is a -- yeah,  
16 that -- I don't recall more. I would have to go  
17 in in detail and see what else it says about  
18 actually the packets and packet sensation and the  
19 packet structure.

20 Q Okay. Do you recall what bandwidths that  
21 the Rose's digital cordless would operate on?

22 A No, I don't. I mean, Rose specifically,

1 because it was frequency hopping, would have been  
2 hopping around on quite a large bandwidth. But  
3 that -- that should not be misconstrued as it is  
4 requiring a lot of bandwidth. It is just how  
5 multiple systems cooperate. It is just -- it is  
6 just a different way to use the required  
7 bandwidth, so we have to be a little careful when  
8 we answer that.

9 Q So maybe just to -- what is frequency  
10 hopping? What does it -- what does that do and  
11 accomplish for a communication system?

12 A So it accomplishes a few things. And this  
13 is why the FCC required it of users in this  
14 spectrum back in those times. It -- it made it so  
15 that you are not occupying at a strong signal  
16 level any given specific frequency for a long  
17 time.

18 So what that allows is other people to --  
19 to use that same sort of overall bandwidth without  
20 creating -- within a very specific part of it.  
21 But frequency hopping also has some security. If  
22 you don't know exactly how my phone is hopping,

1 then you can't reconstruct my signal. So you have  
2 got to synchronize to that hopping, you have got  
3 to know what the hopping pattern is. So it is a  
4 form of what we call spread spectrum.

5 I don't think Rose talks about that, but I  
6 know back in its time that was a requirement to be  
7 licensed.

8 Q I think it mentioned in the present  
9 cordless -- so this is -- I was just looking, as  
10 you said it, Column 1 in Rose, if that is Exhibit  
11 1005. In the present cordless digital telephone  
12 apparatus, the handset and base unit communicate  
13 with one another using FSK modulated digital  
14 signals transmitted on an RF carrier and the 902  
15 to 928 band?

16 A Uh-huh.

17 Q What is FS -- I can almost remember what  
18 FSK is. What is FSK?

19 A Frequency shift keying.

20 Q Yes.

21 A Basically frequency modulation for a  
22 digital signal.

1 Q And is that what -- when it says that, is  
2 that referring to the frequency hopping?

3 A No, it is not. It is not. It is possible  
4 I am not remembering properly about frequency  
5 hopping. My -- my recollection of in this band  
6 902 to 928, you had to frequency hop to operate  
7 unlicensed. Maybe I'm misremembering that, maybe  
8 cordless phones had a carve-out. I don't know  
9 really how relevant this is to the case, but...

10 Q Sure. No, it might just be clearing up  
11 the -- the understanding.

12 A Yes.

13 Q But at least --

14 A He's not talking about hopping here.

15 Q In Rose, it is disclosing kind of an FSK  
16 modulated system that uses the 902 to 928 band?

17 A Definitely that.

18 Q From what we see. And you know, to be  
19 clear, anything else it also says in the patent  
20 I'm not trying to pin you down on -- on just that,  
21 but it -- whatever is disclosed in Rose is what  
22 it -- it would be using?

1 A That's correct.

2 Q And so further on the -- the  
3 Gillig-Rose-Billström combination, you discuss the  
4 remaining claims and we get down to Claim 8. It  
5 is, wherein the data is communicated using  
6 internet protocol?

7 A Yes.

8 Q And it says, based on my review, Gillig  
9 and Rose do not appear to expressly disclose a  
10 communication of data using IP. Okay if I use IP  
11 for internet protocol?

12 A Please.

13 Q I'm sure everyone appreciates that for  
14 sure.

15 When using IP to communicate data, by that  
16 do you mean voice or other communication?

17 A Well, I mean certainly. So obviously  
18 Gillig focused very much on voice. Obviously the  
19 field was evolving, the market was evolving  
20 towards other data, so voice data at a minimum.  
21 Once you have packet data, it opens up a whole  
22 host of other capabilities of your device.

1           Q   How would -- how would a person of skill  
2   in the art implement the -- the Billström and Rose  
3   combination on Gillig to accomplish the dynamic  
4   switching that is required by the '434 where one  
5   is packetized and one is not?

6           A   Well, there is several answers to that,  
7   but to be specific Claim 6 -- Claim 6 unless I'm  
8   mistaken doesn't -- doesn't have that dynamic  
9   switching limitation and that is the one on which  
10   Claim 8 depends, so --

11          Q   You do an analysis in your declaration for  
12   Claim 1 with packet data, do you not?

13          A   Claim 1 with packet data. With digital --  
14   with digital data --

15          Q   I could be wrong.

16          A   Well, I could be wrong. Byrne, you know,  
17   we haven't talked about Byrne, Byrne is digital.  
18   I think the only place that packet data comes --  
19   that comes in is on Claim 8, I mean internet  
20   protocol which really is -- where you need packet  
21   data is only on Claim 8, which depends on Claim 6.  
22   So if there is an analysis that I have on packet



1 data for Claim 1, we will need to go find out,  
2 because that is a little too vague for me to --

3 Q I'm sorry, it is not Claim 1, it is  
4 Claim -- you use the Gillig-Rose-Billström with  
5 Claim 3, which is the only dependent claim  
6 associated with independent Claim 1, my apologies.

7 A Yeah. Just -- yeah, that's right. For  
8 completeness Claim 5 as well.

9 Q Got it.

10 A But we don't need the packet data for any  
11 of that.

12 Q Correct. So in paragraph 155 a POSITA  
13 would have recognized Billström's teaching of  
14 using IP for packet data communication and would  
15 have been motivated to modify Gillig-Rose's  
16 telephone to utilize IP to communicate data, e.g.,  
17 voice data as taught by Billström. And you cite  
18 to 7, you know, Column 7, line 40 through Column  
19 8, line 20 and then Figure 2, and Column 8, line  
20 21 through 46, okay?

21 Do you see that?

22 A I do.

1 Q In reviewing Column 7 and 8 of the cited  
2 disclosures in Figure 2, where is the -- where is  
3 there a disclosure of using packet data  
4 communication to communicate voice data?

5 A Well, let's -- let's review it, those  
6 references that I have got there and we can do  
7 that. My recollection though of -- of the  
8 Billström reference is that he generally talks  
9 about packet versus sort of switched architectures  
10 and doesn't really call out frequently the kind  
11 of -- of data that might be sent over this  
12 network.

13 So I think we can look at these  
14 references, but really this is about the  
15 advantages of using IP to communicate data as  
16 opposed to the specifics about voice.

17 Q Okay. So let's take a look at the  
18 disclosures and see if -- if we can identify  
19 anything.

20 A Okay.

21 Q Column 7, 40 through 56, I don't see  
22 anything specific, do you?

1 A Column 7, 40 through that first paragraph?

2 Q Correct.

3 A And just to be clear, the question I'm  
4 answering is specifically for voice data; correct?  
5 Am I -- is that the question I'm answering?

6 Q Correct.

7 A I do not see anything that calls out voice  
8 data specifically in -- in that first paragraph 40  
9 through 56 or 7.

10 Q And then in the next paragraph that spills  
11 from 7 to -- to 8, which is large, but I see the  
12 basic packet data network service provided is a  
13 standard connection network. We already talked  
14 about that; right?

15 A Yes.

16 Q IP is used to denote the internet  
17 protocol, we talked about that as well; correct?

18 A We did.

19 Q And then it goes on to say value added  
20 services including multicast, broadcast and  
21 electronic mail services may be provided by  
22 network application servers attached to the

1 backbone and access using higher layer protocols  
2 in IP; right?

3 A That's correct.

4 Q Those examples don't appear to be voice;  
5 correct?

6 A If you are talking about specifically the  
7 examples of value added services, multicast,  
8 broadcast and electronic mail services, those are  
9 not voice services.

10 Q Got you. Is there anything else kind of  
11 through the 8th, line 21 that you can see that  
12 would point to -- to voice specifically?

13 A No, no, I don't.

14 Q Okay. 21 to 46 that next paragraph, is  
15 there anything that points to voice specifically?

16 A It is talking about more of an X25 kind of  
17 an architecture.

18 Q Yes.

19 A No, I don't see anything in that paragraph  
20 that specifically calls out voice.

21 Q Okay. Sorry, just one more second. I'm  
22 -- we're about at that lunch time, so I'm just

1 making sure I don't have anything on this little  
2 piece before we break. So if you don't mind, just  
3 one more second?

4 A Of course.

5 Q No, I think that is -- why don't we do a  
6 break and come back at 30 after the hour?

7 A Okay.

8 Q Does that work for everyone?

9 MR. KAZI: Yes, it works here.

10 Q Let's go off the record real fast.

11 (Recess, 12:44 to 1:33 p.m.)

12 Q Welcome back, Dr. Jensen. We were just  
13 talking about the Gillig combinations and I think  
14 we're going to move to Byrne now.

15 A Okay.

16 MR. UDICK: If we could pull up, Mr. Lane,  
17 doc 11, which is Samsung Exhibit 1010.

18 Q If you take a look at that and see if that  
19 is the same Byrne that you relied on and perhaps  
20 the same Byrne that you are looking at natively on  
21 your device?

22 A Yes, this is the same on both. The same

1 that I relied on and the same that I have locally.

2 Q Perfect. So your opinions with respect to  
3 Byrne in your declaration begin on page 98 and  
4 paragraph 165.

5 (Exhibit 7 marked.)

6 Q Correct.

7 A That's correct.

8 Q Okay. Byrne actually refers to Gillig a  
9 number of times; is that correct?

10 A Yes, that is correct. I don't remember  
11 how many, but he definitely refers to Gillig.

12 Q And would it be fair that -- that Byrne  
13 appears to -- to build off of Gillig?

14 A Yeah, I think that is a fair assessment.

15 Q And in the -- so in Claim 1 in the -- we  
16 talked about the -- the dynamic switching  
17 limitation; right?

18 A We talked about it previously, yes, sir.

19 Q If you turn to Byrne Column, I guess, 10?

20 A Yeah, I'm there.

21 Q It would be line 31 -- I'm looking at  
22 paragraph, lines 31 through 42?

1 A Okay.

2 Q It is referring to Figure 3. And when the  
3 CCT 200 receives an incoming call.

4 Do you see that?

5 A I do.

6 Q It says that such a system of Byrne could  
7 utilize a form of call forwarding as disclosed in  
8 U.S. Patent 4,989,230; right?

9 A Yes.

10 Q And that is -- that is Gillig; correct?

11 A Yes, that's Gillig.

12 Q So one of the disclosures for -- for the  
13 switch that occurs in Byrne is a reference back to  
14 the call forwarding of Gillig; right?

15 A As one mechanism, yes, that's right.

16 Q It says at the end, however, such call  
17 forwarding is instructed by CCT 200 and takes  
18 place only after the non-preferred part of the CCT  
19 200 has been paged.

20 Do you see that sentence?

21 A I do.

22 Q Do you have an understanding of what that

1 means?

2 A I'm not sure that I recall exactly when he  
3 says after the non-preferred part of the CCT --  
4 CCT 200 has been paged. My recollection is the  
5 user has specified a preference for the modality,  
6 the radio interface being used. And I don't -- I  
7 don't recall exactly this, the non-preferred part  
8 of the part that has been specified as not --  
9 other than preferred has been paged. I don't -- I  
10 don't -- I don't remember the details of that. I  
11 know that I read it, but I don't remember the  
12 details.

13 Q Okay. And the -- the cordless cellular  
14 devices of Byrne are disclosed or -- strike that.

15 The CCT of Byrne is disclosed in the  
16 embodiments as being a dual-decked GSM device; is  
17 that correct?

18 A Yeah. I mean, he certainly says one of  
19 the embodiment -- my recollection is that earlier  
20 in the disclosure he -- he lists different --  
21 different possible standards that you can use,  
22 like, CT 2 or even CT 0, which is an analog



1 standard and then other standards for cellular.  
2 But he does certainly here in Column 10 where you  
3 are talking below where we have been reading talk  
4 about a combined GSM DECT as one embodiment.

5 Q Got you. And so the -- so when -- it's  
6 getting later in the day it looks like. If we  
7 refer to Column 3, there is one point where Byrne  
8 disparages Gillig at Column 3, lines 8 through 11?

9 A Yes, I'm there.

10 Q Is one of the disadvantages of the CCT  
11 disclosed in Gillig is the user might not know if  
12 a signal is deteriorating until it is too late and  
13 the ongoing call is lost; right?

14 A Right.

15 Q And that relates to Byrne's description of  
16 that -- of what -- of what you looked at as the  
17 dynamic switch of the automatic changeover; right?

18 A Yes. This is relevant to the discussion  
19 we had earlier on that limitation in Claim 1  
20 related to Gillig, yes.

21 Q And this is where Byrne actually kind of  
22 -- fair to say advances the ball over Gillig to --

1 to change the way that -- that handover is  
2 processed?

3 A Yes. And as -- as I had mentioned  
4 earlier, when I read Gillig, I didn't come to the  
5 same conclusion as Byrne does here. And so it is  
6 not -- Gillig to me is not as clear on this as --  
7 as one would hope. But yes, Byrne clearly  
8 interpreted this as the user gets a notification  
9 and then decides right there realtime whether to  
10 make the switch or not.

11 Q And you didn't interpret Gillig in the way  
12 that Byrne did?

13 A Not until I read Byrne.

14 Q Got you. And so in Byrne it talks about  
15 automatic handover. You know, it says it in 4,  
16 you know, at 9 through I would say 14.

17 Specifically to automatically handover to the  
18 system having a good service; right?

19 A Right, or -- or whatever the predetermined  
20 criteria is, but yes, based on some predetermined  
21 criteria, automatic handover can then, handoff can  
22 then occur.

1 Q Sure. And -- and actually, you know,  
2 while it is stated as the requirements for the  
3 selected radius systems in Column 4, columns --  
4 line 50 and down, maybe also sheds light on some  
5 parameters by which the changeover may be  
6 preferred; is that correct?

7 A That's correct.

8 Q And when it is -- when Byrne does the  
9 monitoring that is in Column 5, do you have an  
10 understanding of what it is monitoring for?  
11 Strike that.

12 In Column 5 it talks about monitoring --  
13 monitoring the signals intermittently.

14 Do you have an understanding of the -- of  
15 the purpose that -- that Byrne's device would be  
16 monitoring the signals intermittently?

17 A Yeah. My understanding of this related in  
18 the context of what we were just looking at  
19 before, is you have these predetermined criteria  
20 whether that is signal quality degradation or  
21 you're on an expensive, you know, kind of network  
22 or other things. And it is periodically

1 monitoring those conditions to see if we satisfied  
2 something then to -- then it suggests we need to  
3 -- it needs to make a change.

4 Q Got you. And then if we look in 6 it  
5 says, Figure 1 illustrates a block diagram of a  
6 cellular cordless telephone system, which embodies  
7 the present invention. The system includes a  
8 public switched telephone network, PSTN.

9 Do you see that?

10 A I was reading the wrong place, I am there  
11 now, yes.

12 Q Column 6?

13 A Yeah, I'm there.

14 Q Great. What is your understanding of what  
15 a PSTN is?

16 A A public switched telephone network that  
17 is -- that is our generic telephone, switched  
18 telephone network that is sort of the legacy  
19 network at the time.

20 Q Have you ever heard the term POTS?

21 A Yes. Yes, I have. I don't recall what it  
22 stands for.

1           Q I think it is Plano Telephone System  
2 maybe, something like that.

3           Do you have an understanding when it says  
4 PSTN, do you have an understanding of what that  
5 capabilities -- what that refers to in terms of  
6 the technical aspects of the system?

7           A I don't know all of the details here on  
8 exactly what went into the PSTN and what its  
9 capabilities all were. Of course this was the  
10 basic backbone of our phone system, our landline  
11 phone systems at the time, right.

12           And so even -- even a cellular would  
13 likely connect up to the PSTN and -- and as well  
14 as, of course, the cordless. And it was a circuit  
15 switched network, that is where the switched comes  
16 in. And, you know, it had capabilities of -- of  
17 data as well as, you know, non-voice data and  
18 voice data.

19           Q Got you. In here if you go to Column 7  
20 there are some frequencies listed at the bottom, I  
21 guess, second full paragraph around lines 20 to  
22 24.

1 Do you see that?

2 A Yes, I do.

3 Q Do you see that -- so DECT is 1800 and  
4 1900 megahertz and then GSM in the -- in the -- it  
5 looks like GSM in the UK was 905 to 915 and 950 to  
6 960?

7 A That's correct.

8 Q Do you know if that was the same in the  
9 U.S.?

10 A I don't recall. My recollection is that  
11 GSM had some different bands in the U.S.

12 Q Do you know if it had different bands for  
13 DECT in the U.S.?

14 A I don't.

15 Q Okay.

16 A I just don't recall.

17 Q If -- if you had a DECT and GSM device  
18 that operated on the same bands, could you narrow  
19 the device down to one antenna?

20 A Yes. Yes, you potentially could, if  
21 everything was in the same band or you had an  
22 antenna designed for multiple bands that then they

1 could be in different bands so yes, you could --  
2 you could potentially do that.

3 Q And would that be beneficial?

4 A Having a single antenna, again, we're back  
5 to the definition of better --

6 Q Sure.

7 A -- that we talked about a few hours ago.  
8 But for mobile systems, there is often a push to  
9 reduce the number of antennas and so that can be  
10 an improvement by some -- by some measures.

11 Q Got it.

12 A I will say that having multiple  
13 communications on the same band while it -- having  
14 two antennas doesn't help you, now you have got  
15 some -- you have got some more complex things you  
16 have got to do to separate out those things in the  
17 system. But it is doable, but you are probably  
18 going to create more noise and interference in  
19 such a -- in such an operation.

20 Q Understood. So jumping ahead briefly to  
21 the combination of Byrne, Billström and Wong on  
22 page 130, paragraph 218?

1 A Okay, I'm there.

2 Q Are you there?

3 A Yes.

4 Q And this relates to Claim 8; correct?

5 A That's correct.

6 Q Claim 8 is the -- the claim that requires  
7 IP, where the data is communicated using IP?

8 A That's correct. That claim involves  
9 internet protocol IP.

10 Q To modify Byrne to include Billström, what  
11 changes would be needed -- strike that.

12 To modify Byrne to combine Billström, what  
13 changes would a POSITA need to do?

14 A Okay. Perhaps it is easiest discussed  
15 looking at Figure 2 of Byrne.

16 Q Sure.

17 A So in that context, we are very similar to  
18 where we were with Gillig. Byrne identifies a  
19 cellular receiver, 231, and a cellular  
20 transmitter, 232, together as a combined block, a  
21 transceiver block, 230. Also the cellular audio.  
22 Whether or not the cellular audio in the case of



1     Byrne has to change really depends. Byrne already  
2     has digital audio anticipated, because he has  
3     referenced digital cellular standards.

4             So likely that doesn't need to change  
5     unless someone has opted to do Byrne with an  
6     analog cellular standard. But 230 certainly needs  
7     to change in -- in order to implement Billström's  
8     kind of packet-based communications.

9             And then similar to the other things we've  
10    talked about, if we're changing frequencies, it's  
11    probably not necessary in this case depending on  
12    what standards you chose, but if you were at GSM  
13    there is no change to the antenna to the  
14    frequencies, so likely no change to the antenna.

15            And then, of course, whatever the  
16    microprocessor has to do to maybe interface with  
17    that different block 230, there might need to be  
18    some changes in -- in signal exchanges between the  
19    microprocessor and -- and the block 230.

20            Q     Would the mechanism for handover have to  
21    be modified if you -- if you -- if you combined  
22    Billström into Byrne?

1           A I don't see how the Byrne system decisions  
2 for handover would need to be modified at a high  
3 level. You might -- you might sort of change  
4 criterias slightly, maybe some sort of  
5 signal-to-noise ratio and what the system can  
6 tolerate by changing something like that, but it  
7 is just sort of an adjustment to the same things  
8 you're monitoring, not a wholesale change into  
9 what -- into, you know, the decision criteria.

10          Q Got it. So if we look at Column 7 of  
11 Byrne jumping back to the -- to the antenna, if  
12 you look to line 34, it identifies an alternative  
13 embodiment that is shown by dashed line in which  
14 cordless transceiver and cellular transceiver may  
15 be coupled to a single antenna by way of band pass  
16 filters respectively.

17           Do you see that?

18          A I do.

19          Q Is that consistent with your understanding  
20 of how a DECT GSM could be implemented?

21          A Yeah, this is -- this is one embodiment.

22 I just want to differentiate between this and what

1 you asked me a few minutes ago about a single  
2 antenna where you talked about the same bands.  
3 This approach requires them to be on separate  
4 bands, so the band pass filter can separate out  
5 the signals from each other.

6 Q And so that is what I was just going to  
7 ask. What is a band pass filter?

8 A So a filter generally it -- it allows  
9 certain -- signals at certain frequencies to come  
10 through and blocks everything outside of that  
11 range of frequencies. And so in a band pass  
12 filter, we have different things, low pass, high  
13 pass, band reject, things like this. A band pass  
14 filter specifically allows a certain range of  
15 frequencies to pass-through and then it blocks the  
16 rest.

17 Q So the architecture of Byrne, and this is  
18 purely hypothetical, but let's -- let's say that  
19 the antenna is designed to receive from 905 to 915  
20 megahertz. And one system is 905 to 910, another  
21 is 910 to 915.

22 In an ultra simplified way, a band pass

1 filter would -- if it is the first band pass  
2 filter it would take, you know, I'm going to cut  
3 out everything that is not 905 to 910, and the  
4 second one is going to cut out everything that is  
5 not 911 to 915.

6 Is that in a very simplistic way correct?

7 A Yes, that is very simplistic. We tend to  
8 want a bigger guard band between them, but yes,  
9 your idea you are articulating is accurate.

10 Q It just essentially isolates one portion  
11 of the -- of the band or the frequencies that the  
12 antenna can receive to focus solely on that aspect  
13 of the -- of the frequency; correct?

14 A That's correct.

15 Q Would the -- would the microprocessor be  
16 required -- would there be any changes to the  
17 microprocessor to accommodate processing IP-based  
18 transmissions?

19 A As I mentioned before, it is very likely  
20 that as you change block 230 in Byrne Figure 2,  
21 that the kinds of signals that the microprocessor  
22 would have to exchange with that block 230 may

1 have to change. There may be more parameters to  
2 set or different parameters to set under those  
3 circumstances.

4 Sort of the -- the larger idea of how this  
5 architecture is going to work to allow these  
6 different radio interfaces that is not a -- there  
7 is no big change there. It is mostly how you're  
8 going to interface with that radio.

9 Q Understood. And so when the audio comes  
10 in, it is moved to the cellular or cordless audio  
11 as required; right?

12 A That's correct.

13 Q And then it is -- and then each one are  
14 sent to the transmitter or receiver for the  
15 respective system; correct?

16 A I mean, if the audio comes in from the  
17 microphone?

18 Q Right.

19 A Then it is sent to the transmitter. If  
20 the audio comes in -- if the signal comes in on  
21 the receivers, then it is routed the opposite way  
22 and presumably then out the speaker.

1 Q Right. It comes in on the receiver, goes  
2 through the cordless audio out the speaker as an  
3 example of one way?

4 A That's correct.

5 Q Got it, okay. If we move to Claim 6, if  
6 we go to page 126 of your declaration, paragraph  
7 210?

8 A Okay.

9 Q And this is a limitation that we've  
10 identified as 6D, wherein, the first and second  
11 antenna are configured to stream data  
12 simultaneously?

13 A Yes.

14 Q And so where in Byrne does it disclose  
15 streaming data simultaneously?

16 A Right there in my paragraph 210, right in  
17 the beginning I have a reference to Column 8.

18 Q Yes.

19 A 2 through 9, simultaneously is a cellular  
20 telephone and a cordless telephone. It should be  
21 noted that CCT 200 can be so arranged such that  
22 both cellular and cordless operations are in

1 progress at the same time.

2 Q And when transmitting a -- if cordless --  
3 so here it says that the cellular and cordless  
4 operations are in progress at the same time;  
5 right? Is that the same to you as cellular and  
6 cordless calls being live?

7 A I mean, that -- it certainly includes  
8 that, what you just articulated, that both calls  
9 are happening at the same time, which would be a  
10 somewhat -- the simplest example we could come up  
11 with, because Gillig disclosed it.

12 Q And it disclosed it in the manner that  
13 Gillig disclosed it; correct?

14 A Well, to be precise, Byrne gives this  
15 disclosure. It just talks about operating  
16 simultaneously as a cellular and cordless  
17 telephone. Gillig is the one which, who as you  
18 mentioned, he is cited several times by Byrne who  
19 says an example of this is a three-way call.

20 Q Do you mean an example of this is call  
21 forwarding?

22 A Not call forwarding, three-way linking of

1 calls. So that if I am on Byrne's device or I'm  
2 on Gillig's device and I'm talking to two other  
3 people so -- so now my device is -- is the go --  
4 not just the go between between me and those two  
5 individuals, but between those two individuals.  
6 One of them talks, the other is hearing it and  
7 that is -- that is a -- a very clear situation  
8 where the simultaneous part of this limitation is  
9 happening.

10 Q So I may be confused, so I am -- we kind  
11 of looked at -- at Column 10 of Byrne that kind of  
12 referred to 230. And it says -- it refers to a  
13 system that could utilize a form of call  
14 forwarding as disclosed in -- and it says call  
15 forwarding as disclosed in -- in Gillig.

16 Is there a spot where Byrne points to a  
17 three-way calling in Gillig?

18 A That is -- that is not what I'm suggesting  
19 other than -- what I'm suggesting is, again, here  
20 in Column 8 where it talks about the simultaneous  
21 operation of the cordless link and the cellular  
22 link, so he's disclosing that can happen. An



1 obvious example of when that would be desirable  
2 is -- is what Gillig discloses, which is the  
3 three-way calling.

4 Q So just to push back, in that answer you  
5 had said that Column 8 talks about the  
6 simultaneous operation of the cordless link and  
7 the cellular link. The language has, it can be  
8 clear that both cellular and cordless operations  
9 are in progress at the same time; right?

10 A Well, yes, that is -- that is the second  
11 reference. The first one is, of course, the one  
12 above it. As far as the user is concerned,  
13 simultaneously as a cellular telephone so may  
14 operate, I shouldn't have left that out in line 4.  
15 The CCT 200 may operate simultaneously as a  
16 cellular telephone and a cordless telephone. And  
17 then he makes it more clear that these operations  
18 are in progress at the same time.

19 Q Right. And -- and a device could operate  
20 as both by having the capabilities of both;  
21 correct?

22 A Well, I guess it depends on how you

1 interpret the word operate, but -- but when I see  
2 simultaneously as a cellular telephone and a  
3 cordless telephone, I interpret that to mean that  
4 there is both communications going on  
5 simultaneously.

6 And again, for a patent that has relied,  
7 as you mentioned, so heavily on Gillig and Gillig  
8 makes that a very explicit application, that just  
9 reinforces my opinion that that Byrne would have  
10 been cognizant of that kind of a use as valuable  
11 for his device.

12 Q So if we go down to the following  
13 paragraph it uses the term operating; right? It  
14 says, when operating as a cordless telephone  
15 control signals from the microprocessor enable  
16 cordless receiver and transmitter.

17 Do you see that?

18 A I do, yeah.

19 Q When the microprocessor monitors signal  
20 from the cordless receiver indicating received  
21 signal strength and for detecting received data  
22 and from cordless transmitter for sending data;

1 right?

2 A Yes, that is what it says.

3 Q So the microprocessor is monitoring  
4 control signals for the cordless transceiver for  
5 detecting incoming calls, security codes and  
6 broadcast information relevant to the cordless  
7 system; right?

8 A Yes, that's what it says.

9 Q So that -- what isn't in there is an  
10 active call; correct?

11 A When you say an active call, okay --

12 Q An open circuit?

13 A So -- so let me just make sure that is not  
14 there. For detecting received data.

15 Okay. So I don't think this paragraph  
16 talks specifically about a call other than in sort  
17 of indicating that a call is coming in, there is  
18 data that is being exchanged from the cordless  
19 transceiver to the microprocessor to say a call is  
20 coming in or telling it that a call needs to go  
21 out. This paragraph doesn't deal specifically  
22 with what is happening during the phone call, but

1 more to establish the phone call. Is that what  
2 you are asking me?

3 Q That was my understanding of the paragraph  
4 and I wanted to see if that -- if -- if it was  
5 yours as well. That it was more related to  
6 monitoring the link to know if it is ready or if a  
7 call is incoming, so whether or not -- monitoring  
8 activity on the -- that portion of the device?

9 A But I need to add that I'm very reluctant  
10 to render an opinion that the word operating is --  
11 is restricted to that set of functions, just  
12 because the inventor says I want to teach you that  
13 when we're operating as a cordless telephone that  
14 here is -- here is some of the things that are  
15 happening between the microprocessor and the  
16 cordless transceiver.

17 I wouldn't -- I would be very reluctant  
18 and I see nothing in the record that says that we  
19 need to limit the definition of operating to that  
20 set of functions right there.

21 Q And a person of skill in the art would,  
22 when understanding the language of a -- of a -- of

1 a reference look to the reference as a -- as a key  
2 as to how the drafter is using the language;  
3 correct?

4 A That is certainly one consideration, but  
5 -- but when operating as a cordless telephone  
6 standing by itself, it certainly has meaning to  
7 someone in the art. A POSITA -- when I hear  
8 operating as a cordless telephone, that certainly  
9 embodies all of this control signal exchange that  
10 is happening to establish a call and establish  
11 that connection or to end that connection.

12 But when operating as a cordless  
13 telephone, it has also got to include what the  
14 cordless telephone is designed to do, which is  
15 that communication. In other words, this language  
16 doesn't tell me that is the restriction on the  
17 word operating, but it tells me what aspect of  
18 what happens when it is operating as a cordless  
19 telephone.

20 Q And do you recall anything in Byrne that  
21 tells you that operating also specifically means  
22 a -- a live connection?

1           A I don't recall that kind of specificity in  
2 the specification.

3           Q And if it was operating simultaneously, is  
4 there any disclosure of how the audio switch 260  
5 would handle the -- the incoming and outgoing  
6 audio?

7           A I don't recall any such disclosure about  
8 such a detail. I should add that that is not a  
9 particularly difficult thing to implement, right,  
10 to just route the audio where it needs to go based  
11 on the circumstances.

12          Q And -- and but we did talk about earlier  
13 that Byrne was trying to solve this issue of what  
14 it didn't like about Gillig was you can't switch  
15 over -- you can't do this automatic handover in  
16 time; right? It is trying to maintain a  
17 connection; right?

18          A That -- that is -- Byrne is making that  
19 argument that that is an improvement over Gillig.

20          Q If you had two live connections at the  
21 same time, there wouldn't be a handover, would  
22 there?

1           A No. Again, what I fear this kind of a  
2 conversation does is it takes two different kinds  
3 of uses and benefits of the device and says only  
4 one of them is available to the user. It can't --  
5 it can't forward to the other radio when you are  
6 only trying to do one call, if it also can enable  
7 three-way calling.

8           I think Gillig makes it very clear that  
9 his device can be both and it depends on the  
10 usage. So that is where I get uncomfortable is  
11 when we start wanting to restrict what it can and  
12 can't do based on one use model.

13          Q And you would agree that when you read the  
14 Byrne reference you have to understand it for what  
15 it teaches; correct?

16          A Yes, I do.

17          Q Is there anything -- excuse me, I'm sorry?

18          A Sorry, you are going through that.

19          Q It is okay, lingering effect, but no big  
20 deal, but I appreciate it.

21                 So do you see in Column 8, line 44, I will  
22 just briefly refer to it. It says, referring to

1 Figure 3 and then it goes on?

2 A Yes.

3 Q So there is that and I'm just putting some  
4 markers in two spots. And then in Column 9 at 31,  
5 it is referring to Figure 4?

6 A Yes.

7 Q And these are two figures in Byrne that  
8 are logical flow diagrams for how it -- this  
9 probably -- or this application discloses that its  
10 claimed invention operates; right?

11 A Yes.

12 Q I was trying to remember if it gave a  
13 description of Figure 2 and 3, it did not. If we  
14 look at Figure 3 and 4, if we look at Figure 3  
15 first?

16 A Sure, I'm there.

17 Q Is there anything in Figure 3 that shows a  
18 simultaneous cordless and cellular link or  
19 connection -- so strike that.

20 Is there anything in Figure 3 that shows a  
21 simultaneous cordless or cellular call, using call  
22 since that is the term that Byrne uses?



1           A No. My -- my understanding -- my  
2 understanding of Figure 3 that I have looked at  
3 this before obviously, is that this is really  
4 about making a decision about which radio  
5 interface to be using based on a number of  
6 different kind of decisions or pieces of  
7 information to help make decisions.

8           Q And then there is a -- so if you see the  
9 call progress -- so at the 305 decision block,  
10 there is a branch for yes that goes to 321?

11          A Yes.

12          Q And -- and if we go over to Figure 4, you  
13 enter the Figure 4 decision or flow diagram at  
14 321; correct?

15          A Right, that is what that would mean.

16          Q And is there anything in Figure 4 that  
17 shows a simultaneous cordless and cellular call?

18          A No. Again, this block diagram, obviously  
19 working with Figure 3 is about choosing which  
20 modality to use, whether cordless or cellular.

21          Q And so Figure 3, you know -- when we get  
22 to Figure 4 there is a call in progress on one of

1 the two nodes; correct?

2 A That's correct.

3 Q And then -- it then asks is the cordless  
4 available, yes. Is there a cordless call in  
5 progress, yes, it goes to 304; right?

6 A Yes.

7 Q And then if it -- if the cordless is not  
8 available, it then asks is the cellular available  
9 and the answer -- so is it yes, and the cellular  
10 in progress, no. And then you handover the call  
11 to cellular; right?

12 A Yes, under that flow, that is what  
13 happens.

14 Q And so Figure 4 is -- there is one call in  
15 progress. And trying to make that -- that  
16 decision on an automatic handover based on 304,  
17 which is the -- the conditions, the SAR, the  
18 conditions associated; right?

19 A Yes. 304 is to go back up to Figure 3  
20 exactly and sort of enter that monitoring, that  
21 monitoring block at the top and go through the  
22 whole thing again.

1           Q For things like what is the signal  
2 strength like or -- or something like that;  
3 correct?

4           A Yeah, those criteria we talked about  
5 previously.

6           Q Yes. I think I have one question. If we  
7 look at -- I just don't understand the  
8 annotations. If we look at paragraph 213, pages  
9 128 that it spills over to a diagram, an annotated  
10 on 129?

11          A I'm there.

12          Q It is -- it is Figure 2; correct?

13          A The annotated diagram is Figure 2 from  
14 Byrne.

15          Q Yeah. And there is a discussion in Byrne  
16 or a discussion in 213 that Byrne describes that  
17 the cellular communication antenna is coupled to  
18 the cellular telephone transceiver and configured  
19 to transmit signals for cellular telephone calls.  
20 And it does the same for cordless, coupled to the  
21 cordless telephone transceiver and configured to  
22 transmit signals for cordless telephone calls.

1 I guess the -- I'm unfortunately looking  
2 at a black and white version, but the shaded --  
3 what is shaded in this annotated version, right,  
4 is the antenna, a cordless receiver, cordless  
5 transmitter on one side and then a -- a arrow that  
6 goes to the microprocessor then it is kind of  
7 mirrored on the cellular side; right?

8 A That's accurate, that is what the shading  
9 includes, yes.

10 Q Yeah. In reading this schematic, do you  
11 have any sense of why, for example, you know when  
12 you go from the antenna to it is a -- it is a  
13 solid line to the band pass filter to the cordless  
14 receiver and transmitter. Same thing through the  
15 cordless audio and the audio switches, but it is  
16 like a different kind of a block, big arrow  
17 between the receiver transmitters and the  
18 microprocessor?

19 A That would -- that would typically mean,  
20 and I think that makes sense in the context of  
21 this. When you have that it is more almost like a  
22 bus. It is -- it is the ability to exchange a

1 variety of different kinds of information between,  
2 say, the cordless receiver transmitter and the  
3 microprocessor.

4           So it -- it -- it just usually embodies a  
5 set of connections that might be -- it could be  
6 separate connections, separate pins, separate  
7 wires between the microprocessor and that cordless  
8 transceiver or it could be more of a bus where you  
9 are just exchanging data and saying, okay, here is  
10 the command for this, now here is the next command  
11 sort of in a more digital communications scheme.  
12 So it just -- that is what that would -- that is  
13 what that would represent.

14           Q Got it. Is there a reason, because I  
15 think it is talking about being coupled from the  
16 antenna through the transceiver that the band pass  
17 filter and the -- the thinner lines aren't  
18 highlighted or annotated in anyway?

19           A I don't know if I understand. You are  
20 asking me why we didn't highlight in that figure  
21 the lines in that antenna between the antenna and  
22 the transceivers.

1 Q Yeah. And more specifically it was  
2 confusing 213, the paragraph, doesn't mention the  
3 microprocessor, but it does talk about the -- the  
4 coupling between -- from the antenna through the  
5 transceiver which I -- I understand to be the  
6 receiver and transmitter. Do you agree  
7 transceiver is a shorthand for transmitter and  
8 receiver?

9 A Yes, I do agree.

10 Q And so that is why it was confusing me, in  
11 the discussion of coupling the antenna to the  
12 transceiver how we move kind of south of the  
13 transceiver for a shading, but don't include the  
14 path, the actual coupling between the antenna and  
15 the transceiver?

16 A Yeah. So I can't remember whether or not  
17 we were maybe being a little sloppy as we borrowed  
18 from other highlighted figures for my document.  
19 But really the part to focus on here is what you  
20 are referring to, is that connection between the  
21 antenna and the cellular, you know, transmitter  
22 receiver or the antenna and the cordless

1 transmitter receiver. That certainly is what is  
2 being referred to and needs to be the focus of  
3 this diagram for claim limitation 6E, as I've  
4 defined it.

5 Q Okay. Thank you. I was just uncertain  
6 why we were down to the microprocessor. Do you  
7 know if there is -- if that is an artifact or if  
8 that was -- if it -- if it is intentional to be --  
9 to include to the microprocessor?

10 A Well, all I can say is it is not  
11 intentional. That -- that is not relevant for  
12 that claim limitation, but we, you know, I used  
13 this figure, I used it several times with the --

14 Q Sure.

15 A -- exact same shading for different claim  
16 elements. So I will admit I may have been sloppy  
17 there, but it is -- no, that shading to the  
18 microprocessor is not an important part for this  
19 claim limitation.

20 Q Okay, so, totally understand it. I  
21 noticed that you used it before, that is why I  
22 wanted to check to see if that was an artifact or

1 intentional.

2 So as a natural quick stopping point, can  
3 we take a quick five or ten or maybe do 10 and get  
4 back to it?

5 A That is fine with me.

6 (Recess, 2:32 to 2:43 p.m.)

7 Q Dr. Jensen, about how much time did you  
8 spend preparing for today's deposition?

9 A Between reading the references in my  
10 report, spending a little time with counsel, I  
11 don't know, 10, 15 hours.

12 Q And when did you conduct that preparation?

13 A Over the course of the prior four days  
14 from now.

15 Q Was there -- was the time spent roughly  
16 evenly distributed between the days or was there,  
17 like, one big day and some follow-up?

18 A Fairly equally distributed with different  
19 activities on different days.

20 Q You said you spent a little time with  
21 counsel. About how much time did you spend with  
22 counsel?



1 A I estimate six hours.

2 Q And whom did you meet with?

3 A Mr. Kazi and Mr. Park.

4 Q Did you meet with anyone else in  
5 preparation for today's deposition?

6 A Just this morning for just a few moments  
7 with Mr. Jeremy, is it Moldanado. I don't know  
8 how to pronounce his last name.

9 Q For about how long was that this morning?

10 A 20 minutes.

11 Q And other than the materials cited in the  
12 report, did you review any additional materials to  
13 prepare yourself for today's deposition?

14 A No.

15 Q Have you reviewed the -- so you submitted  
16 your declaration before there was an institution  
17 decision; correct?

18 A That's my understanding, yes.

19 Q Have you reviewed the institution  
20 decision?

21 A It was provided to me. I have not  
22 reviewed it.

1 Q So if you haven't reviewed it, there is  
2 nothing in it that at this point changes or  
3 impacts any -- any opinions that you have given in  
4 your declaration; correct?

5 A That's correct.

6 MR. KAZI: I'm going to object to  
7 foundation on that prior question, but you can go  
8 ahead.

9 Q A couple more cleanups. In the prior  
10 expert declarations or reports that you have  
11 given, have any of them ever been stricken in part  
12 by a court or a administrative body?

13 A No.

14 Q Sorry, I'm just ticking some boxes here.

15 In front of you today you have had copies  
16 of native clean copies of the exhibits that we've  
17 talked about; correct?

18 A Native and -- well, I don't know what you  
19 mean by native. They have been clean copies. I'm  
20 not sure what you mean by native.

21 Q Sure. PDF, clean PDFs of the -- of the  
22 exhibits that -- that you have -- that we've

1 talked about today?

2 A I have been relying exclusively on clean,  
3 yeah, PDFs of all the documents with no  
4 annotations.

5 Q Okay. And available and open to you, so  
6 not something stored in a far away folder in your  
7 computer. You haven't been looking at any  
8 annotations or -- or previously made notes; is  
9 that correct?

10 A No, no previously made notes, nothing on  
11 my computer, nothing written that I'm referring  
12 to.

13 Q Got you. And during any of the breaks  
14 today, have you spoken with counsel about the  
15 substance of your testimony?

16 A I have not.

17 MR. UDICK: All right. I will pass the  
18 witness.

19 MR. KAZI: Okay. Can we just take a quick  
20 break? I don't think I will have any redirect.  
21 Let me just gather my notes. I wasn't expecting  
22 you to pass right this minute. Give me a few

1 minutes. I will take a quick break and I think I  
2 will get back on the record and just close it out.

3 MR. UDICK: Thanks.

4 (Recess, 2:49 to 2:51 p.m.)

5 MR. KAZI: We have no questions although  
6 we reserve the witness' ability to review and sign  
7 the transcript.

8 (Deposition adjourned at 2:51 p.m.)

9

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\_\_\_\_\_  
11 MICHAEL ALLEN JENSEN, PhD

12

13 Subscribed and sworn to before me  
14 this day of 2023.

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C E R T I F I C A T E

I, SUSAN S. KLINGER, a certified shorthand reporter within and for the States of Texas and California, do hereby certify:

That MICHAEL ALLEN JENSEN, PhD, the witness whose deposition is hereinbefore set forth, was duly sworn by me before the commencement of such deposition and that such deposition was taken before me and is a true record of the testimony given by such witness.

I further certify that the adverse party, Samsung, was represented by counsel at the deposition.

I further certify that the deposition of MICHAEL ALLEN JENSEN, PhD, occurred remotely on January 19, 2023, commencing at 8:32 a.m. to 2:51 p.m.

I further certify that I am not related to any of the parties to this action by blood or marriage; and that I am not employed by or an attorney to any of the parties to this action, and

1 that I am in no way interested, financially or  
2 otherwise, in the outcome of this matter.

3 IN WITNESS WHEREOF, I have hereunto set my  
4 hand this 23rd of January, 2023.

5  
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7 Susan S. Klinger, RMR-CRR, CSR

8 Texas CSR# 6531

9 California CSR# 14487

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