

Page 1 1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 ----- 3 BEFORE THE PATENT TRIAL AND APPEAL BOARD 4 ----- 5 DISH NETWORK L.L.C. AND 6 DISH TECHNOLOGIES L.L.C. 7 Petitioners, 8 V. 9 DIGITAL BROADCASTING SOLUTIONS, LLC, 10 Patent Owner. 11 ----- 12 Case IPR2023-00977 13 U.S. Patent No, 9,538,122 14 - - - 15 April 25, 2024 16 - - - 17 Oral deposition of IMMANUEL FREEDMAN, 18 Ph.D., held in the offices of Esquire 19 Deposition Solutions, 1835 Market Street, 20 Suite 500, Philadelphia, Pennsylvania 19103, 21 commencing at 9:06 a.m. on the above date, 22 before Teresa M. Beaver, a Professional Court 23 Reporter and Notary Public. 24 - - - 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000	Page 3 1 I N D E X 2 WITNESS PAGE 3 IMMANUEL FREEDMAN Ph.D. 4 BY MR. WILLIAMS 5 5 6 7 8 E X H I B I T S 9 MARKED DESCRIPTION PAGE 10 None 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Page 2 1 A P P E A R A N C E S : 2 3 BAKER BOTTS, L.L.P. 4 BY: ELIOT D. WILLIAMS, ESQUIRE 5 1001 Page Mill Road 6 Building 1, Suite 200 7 Palo Alto, California 94304 8 eliot.williams@bakerbotts.com 9 Counsel for the Petitioners 10 11 BAKER BOTTS, L.L.P. 12 BY: THOMAS B. CARTER, JR., ESQUIRE 13 910 Louisiana Street 14 Houston, Texas 77002 15 thomas.carter@bakerbotts.com 16 Counsel for the Petitioners 17 18 WILLIAMS SIMONS & LANDIS, PLLC 19 BY: ERIC CARR, ESQUIRE 20 The Littlefield Building 21 601 Congress Avenue 22 Suite 600 23 Austin, Texas 78701 24 ecarr@wsltrial.com 25 Counsel for the Patent Owner 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477	

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1 - - -
2 IMMANUEL FREEDMAN Ph.D., after
3 having been duly sworn, was examined and
4 testified as follows:
5 - - -
6 EXAMINATION
7 - - -
8 BY MR. WILLIAMS:
9 Q. Good morning. Can you state
10 your full name, please?
11 A. Immanuel Freedman.
12 Q. And you've been deposed before;
13 correct?
14 A. Correct.
15 Q. Do you know how many times?
16 A. Certainly more than ten.
17 Q. Do you recall the last time you
18 were deposed? Well, when was the last time
19 you were deposed?
20 A. A few months ago.
21 Q. All right. Is there any reason
22 you can't testify truthfully or accurately
23 today?
24 A. No.

Page 6

1 Q. If you don't understand any of
2 my questions, you'll let me know. Otherwise
3 I'm going to assume you understood them.
4 Okay?
5 A. Fine.
6 Q. All right. I'm going to hand
7 you what was previously marked as Exhibit
8 2008.
9 A. I could ask if you could please
10 speak a little more loudly.
11 Q. Sure. While we're at it, I'm
12 going to hand you what's been marked as
13 Exhibit 2006.
14 Can you look over those
15 documents and let me know if you recognize
16 them?
17 A. Yes, I recognize them.
18 Q. Okay. Starting with exhibit,
19 the one that's marked Exhibit 2006, can you
20 just tell me what that one is?
21 A. It's titled Declaration of
22 Immanuel Freedman in Support of Digital
23 Broadcasting Solutions, LLC's Patent Owner
24 Response.

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1 Q. And this declaration was
2 submitted in IPR 2023-00976. Is that
3 correct?
4 A. According to the document.
5 Q. The front of the document
6 references patent number 8,929,710.
7 Do you see that?
8 A. I see that in the header of the
9 document.
10 Q. Are you familiar with that
11 patent?
12 A. I have reviewed that patent.
13 Q. During today's deposition, I may
14 refer to that as the '710 patent.
15 Do you understand what I'm
16 talking about if I do so?
17 A. Yes.
18 Q. Okay. Great.
19 This is your declaration;
20 correct?
21 A. This is a declaration that I
22 have made.
23 Q. On the last page, Page 68,
24 there's a signature there. Is that your

Page 8

1 signature?
2 A. That appears to be my signature.
3 Q. Do you have any reason to
4 believe that's not your signature?
5 A. No.
6 Q. Do you recall signing this
7 document?
8 A. Yes.
9 Q. Is this document, to the best of
10 your recollection, truthful and accurate?
11 A. May I ask a clarification
12 question? Do you mean are the contents
13 truthful and accurate or do you mean that it
14 is a truthful and accurate copy of my
15 document?
16 Q. Fair question. Are the contents
17 truthful and accurate?
18 A. To the best of my knowledge.
19 Q. When is the last time you
20 reviewed this document?
21 A. I reviewed the document
22 yesterday evening.
23 Q. Was there anything in the
24 document you noticed that you'd like to



Page 9 1 change? 2 A. No. 3 Q. Let me ask you to look at the 4 document that's been marked as Exhibit 2008. 5 This bears the same title, 6 Declaration of Immanuel Freedman in Support 7 of Digital Broadcasting Solutions Patent 8 Owner Response; correct? 9 A. Yes. 10 Q. And this document that was 11 captioned in IPR 2023-00977; correct? 12 A. According to the front of the 13 document, yes. 14 Q. And then under that there's a 15 patent number listed 9,538,122. 16 Do you see that? 17 A. Yes, according to the header. 18 Q. Are you familiar with that 19 patent? 20 A. I've reviewed that patent. 21 Q. And today I may refer to this as 22 the '122 patent and you'll understand what 23 I'm talking about? 24 A. Yes.	Page 11 1 accurate to the best of my knowledge. 2 Q. So I'm going to ask you to turn 3 in Exhibit 2006 to Paragraph 22. 4 A. Yes. I'm at Paragraph 22. 5 Q. This paragraph identifies a few 6 documents that you reviewed. The list you 7 identify here as the '710 patent, the 8 prosecution history of the '710 patent and 9 various prior art and technical references 10 from the time of the invention. 11 Do you see that? 12 A. Yes. 13 Q. And the next paragraph you say 14 you reviewed all of the papers and exhibits 15 in the record for IPR proceeding 2023-00976. 16 Do you see that? 17 A. Yes, I do. 18 Q. Okay. Other than the things 19 that are identified in those two paragraphs, 20 was there anything else that you considered 21 in preparing these declarations? 22 A. Not that I recall. 23 Q. And the various prior art and 24 technical references that you mentioned, are
Page 10 1 Q. I'm going to ask you again, is 2 this your declaration? 3 A. It's a declaration that I have 4 made. 5 Q. And on the last page there's a 6 signature. Does that appear to be your 7 signature? 8 A. That appears to be my signature. 9 Q. And any reason to think that's 10 not your signature? 11 A. No. 12 Q. Do you recall signing this 13 document? 14 A. Yes. 15 Q. And when is the last time you 16 reviewed this document? 17 A. Last night. 18 Q. Is there anything in the 19 document that you think needs to be changed? 20 A. No. 21 Q. And again, do you believe the 22 contents of this document are truthful and 23 accurate? 24 A. I believe they are truthful and	Page 12 1 those all documents that are exhibits or 2 papers in the proceeding or would it include 3 other materials? 4 A. It's intended to cover the 5 materials that are exhibits in the 6 proceedings and no other documents. 7 Q. Thank you. What about in the 8 other exhibit, 1008? You have similar 9 paragraphs in that declaration. 10 A. May I correct the record, 11 Counsel? 12 Q. Okay. 13 A. You said Exhibit 1008. It is 14 2008. 15 Q. It is 2008, yes. You have 16 similar language in Paragraphs 22 and 23. 17 Do you see that? 18 A. I see that. 19 Q. Again I guess the question I 20 would ask is: Were there any other prior art 21 and technical references that you reviewed or 22 sorry, that you considered in preparing your 23 declaration besides the ones that are of 24 record in the IPR proceeding?

Page 13 1 A. No. 2 Q. Can you describe for me, without 3 revealing any communications you had with 4 counsel, the process for reviewing these 5 declarations? 6 A. Yes. It was a collaborative 7 effort in which counsel provided some 8 information. I reviewed it. I provided 9 further information. Counsel reviewed it 10 again. 11 Q. Did you have conversations with 12 counsel before you saw an initial draft of 13 the declaration? 14 A. I seem to recall that the 15 conversation with counsel that were held 16 previous to that included interview, that to 17 me being retained and the drafting of the 18 engagement letter and some preliminary. And 19 counsel outlined their general theory of the 20 case. I commented on the general theory of 21 the case after having read the -- after 22 having read the patents-in-suit. 23 I reviewed whatever counsel 24 provided. I cannot recall if counsel	Page 15 1 primarily prepare by self-study. 2 Q. And what was the self-study that 3 you did? 4 A. Self-study included rereading 5 the patents-in-suit, rereading the 6 declaration, rereading the patent owner, 7 rereading the petition, rereading the prior 8 art that had been referenced in the 9 declaration. 10 Q. You said primarily prepared by 11 self-study. Was there any other preparation 12 that you did? 13 A. Brief conversation -- simply 14 brief conversation with counsel in which we 15 agreed that that would be the best approach. 16 Q. Okay. And you said brief. Less 17 than an hour? 18 A. I think we're speaking about 19 less than 15 minutes. 20 Q. Okay. Fair enough. 21 In your declaration, you say 22 you're charging an hourly rate in this IPR. 23 Can you tell me what that is, 24 approximately?
Page 14 1 provided a preliminary claims chart or not. 2 But nonetheless, whatever there was, I 3 reviewed. Retained counsel provided a draft. 4 I reviewed it. And we worked back and 5 forward until I was satisfied with it. I 6 tell literally every counsel who retains me 7 that I will only sign a document if I truly 8 believe every word in it. 9 Q. Okay. Do you recall 10 approximately how many hours you worked on 11 this matter prior to signing these 12 declarations? 13 A. I'm sorry, Counsel. I don't 14 recall. I worked on a number of cases 15 recently and I would have to look at my 16 billing records to be sure. 17 Q. When did you begin preparing for 18 today's deposition? 19 A. A couple of days ago. 20 Q. Can you describe for me 21 generally what you did to prepare for today's 22 deposition? 23 A. Oh, I had brief conversations 24 with counsel and we agreed that I would	Page 16 1 A. Okay. For this type of work, 2 and these type of clients, I'm currently 3 billing \$450 an hour for all hours associated 4 with the case. 5 Q. Okay. Other than preparing -- 6 the process of preparing these declarations 7 and preparing for today's deposition, have 8 you had any other work in connection with 9 these IPR matters? 10 A. Sorry, I don't quite understand 11 your question, Counsel. 12 Q. Yeah. I guess I'm just trying 13 to figure out if you have spent time on these 14 matters other than the time you spent 15 preparing the declarations and then the time 16 you spent preparing for today's deposition? 17 A. Oh, no. 18 Q. Prior to this matter, were you 19 familiar with Digital Broadcasting Solutions? 20 A. You mean -- 21 Q. The company. 22 A. The company, no, I had never 23 encountered them before. 24 Q. What about Dish Network? Were



Page 17 1 you familiar with Dish Network? 2 A. Only by reputation. 3 Q. Prior to this matter, have you 4 ever done any expert consulting work in 5 matters involving Dish Network or Dish 6 Technologies? 7 A. I believe I haven't. 8 Q. Haven't. I assume that's true 9 of Digital Broadcasting Solutions. You 10 haven't worked for them before? 11 A. No, I haven't. 12 Q. I'm just going to hand you 13 what's been marked as Exhibit 2007 in the 976 14 IPR. 15 Do you recognize this document? 16 A. Yes. 17 Q. What is it? 18 A. It's appears to be my curriculum 19 vitae. 20 Q. Okay. I have a couple of 21 questions about it. 22 So, just looking at the 23 experience section of your -- I'm going to 24 call this a CV. Is that all right?	Page 19 1 technologies been that you worked on this in 2 connection with your work as a litigation 3 expert consultant? 4 A. Nearly all of them have related 5 to image or imaging systems. Many of them 6 have related to co decs. Others have related 7 to the systems as a whole. There have been a 8 very small number of cases that have related 9 to other technologies, in particular, the 10 modeling of biological systems in 11 pharmacometrics. But nearly all of them have 12 related to imaging systems. 13 Q. Okay. And your formal 14 education, your bachelors and your Ph.D. were 15 in physics; correct? 16 A. Correct. 17 Q. So when did you first begin 18 working on image or video technologies? 19 A. If we take a broad, expansive 20 view of this, then I started interacting with 21 images at an advanced level during my 22 doctoral thesis in astrophysics, satellite 23 imagery. 24 If we take a more limited and
Page 18 1 A. That's fine. 2 Q. Look at the experience section 3 of your CV. 4 One of the entities you identify 5 as Freedman patent. And it's listed several 6 times in the document. 7 Can you explain what that is? 8 A. Yes. That is my consulting 9 company, a sole proprietorship. 10 Q. And in connection with that 11 consulting company, you do expert witness 12 work? 13 A. It's primarily been work serving 14 as an expert consultant or expert witness. 15 Historically, very long time 16 ago, I also prosecuted a small number of 17 patents in view of being a registered patent 18 agent, but I no longer do that kind of work. 19 Q. Okay. When did you first -- 20 when was your first litigation expert 21 consulting project? 22 A. I seem to recall that it was 23 around the year 2000. 24 Q. And in general, what have the	Page 20 1 restricted view of it, in terms of the focus 2 on digital television, that was in 1994 with 3 Optivision where I worked on their MPEG 2 4 encoder. 5 Q. You said Optivision was 6 developing an MPEG 2 video encoder at the 7 time? 8 A. Yes. 9 Q. According to the CV, you were, 10 at least at the time of this CV, you are 11 presently the clinical pharmacology director 12 for Takeda Pharmaceuticals. Is that still 13 the case? 14 A. Yes, I'm still employed by 15 Takeda Pharmaceuticals. My formal title is 16 director of clinical pharmacology. My work 17 is divided about 50 percent between 18 mathematical modeling and systems, many of 19 them biological and regulatory interaction 20 for documents intended for pharmaceutical 21 regulatory agencies. 22 Q. Can you tell me what -- I don't 23 know how to pronounce this company, it's 24 spelled A-N-U-G-R-A-H-A?

Page 21 1 A. This was a previous attempt by 2 me at developing a sole proprietorship. The 3 focus of that sole proprietorship was to 4 produce fine art screen savers. I worked 5 with a number of professional artists who 6 would like their work showcased and sold 7 through that technology. And my thrust there 8 was to use state of the art adaptive 9 quantitation techniques with JPEG imagery to 10 provide very good quality to highly 11 compressed images that would be of sufficient 12 quality to satisfy the stringent requirements 13 of professional artists. 14 Q. And how do you pronounce the 15 name? 16 A. Anugraha. 17 Q. Does that have some meaning? 18 A. It's an Indonesian word. And 19 I'm sorry, I cannot quite remember what its 20 meaning was. I just thought it was a nice 21 name. 22 Q. Okay. What city do you live in 23 now? 24 A. Harleysville, in Pennsylvania.	Page 23 1 stream was encoded and then decoded in a time 2 shifted fashion after delay. And for that 3 particular set top box, it appeared to run 4 for a fixed amount of time, then stop, which 5 no one could clearly understand turned out to 6 be a kind of race condition between the 7 streamers and the embedded system, a sort of 8 deadlock, which I was able to resolve. 9 At that time, my focus for them 10 was embedded systems programming and this was 11 essentially a real-time operating system 12 problem. 13 Q. You used this word streamers. 14 Can you just explain what that means? 15 A. The streamers for Replay 16 Networks were -- were software functions that 17 if I remember correctly, and this is a long 18 time ago, encoded and decoded the video data 19 in a form that could be continuously 20 streamed. 21 Literally, they were streamed, 22 written onto a disk, and written off a disk. 23 I do not recall right now whether it was a 24 physical disk, solid state or memory. It is
Page 22 1 Q. Now, the address you have on the 2 CV for Takeda is in Cambridge. Is that a 3 remote position you have for Takeda? 4 A. Yes. My position is fully 5 remote. 6 Q. In any of the prior industry 7 experience you have, how much of that related 8 to time shifting of video programming? 9 A. If you're speaking about how 10 much related specifically in industry to time 11 shifted programming, I would point primarily 12 to my working as a consultant for Replay 13 Networks. 14 Q. For which company? 15 A. Replay Networks. 16 Q. And what years was that? That 17 was '99 and 2000? 18 A. Let us just check. Yes. 19 Q. And what was the project you 20 were working on at that time? 21 A. The project related to resolving 22 an issue with the streamers. In simple 23 terms, to perform the time shifting, the 24 input, MPEG stream, you know, the input video	Page 24 1 just too long ago to recall. 2 Q. So, that product when you say 3 involved continuous streaming, you're talking 4 about a user experience of watching a video 5 that's being delivered over a network? 6 A. It could be, yes. That's one 7 interpretation of it. That's one of the uses 8 of the Replay Network set top box. 9 Q. Is there a different usage that 10 would involve continuous streaming, as you 11 just described it? 12 A. Well, I think that when I say 13 that networks is one use, I'm simply 14 referring to the source of the video imagery. 15 So, in principal, it could come 16 from another source, perhaps the owner's 17 video surveillance system, perhaps the 18 owner's stored imagery from some other 19 source. But in general, the particular use 20 was time shifting television. 21 I'm trying to recall whether it 22 was delivered by a cable network or whether 23 over the air digital broadcasting was 24 prevalent at that time.

Page 25 1 More likely than not, in the 2 United States, it would have come from a 3 cable network. 4 Q. So your CV describes this work 5 as being for a digital video recorder. 6 Was that what the Replay product 7 was? 8 A. Yeah. Essentially, that's -- 9 that's what it -- that's what it -- that's 10 how it worked. It was essentially an 11 additional device, additional to the cable 12 set top box that essentially stored and time 13 shifted the streaming video. 14 Q. And in terms of time shifting, 15 can you explain what that means or how you 16 understand that term at the time? 17 MR. CARR: Objection to the 18 form. 19 THE WITNESS: So, I think that 20 you're -- you're asking a large question. 21 I'll try to answer it in a focused manner for 22 that particular system. 23 So, the focus for that 24 particular system included things like	Page 27 1 of Ordinary Skill in the Art; correct? 2 A. Correct. 3 Q. You say based on your 4 professional experience, you understand the 5 capabilities of a POSITA, as such a POSITA is 6 defined by petitioner. 7 Do you see that? 8 A. Yeah. 9 Q. Do you recall what definition of 10 POSITA you were using to make that statement? 11 A. Let me first check if there's an 12 actual definition in my declaration. 13 I do not immediately see a 14 definition in the declaration. It's just 15 something I would normally put in there. It 16 does say it is defined by the petitioner. 17 So, may I view how petitioner 18 defined it to properly respond to this? I 19 will almost certainly have seen some 20 definition. 21 Q. Okay. We'll do that in one 22 second. 23 Before I do that, so, is it 24 correct to assume that in your declaration,
Page 26 1 receiving a broadcast program, storing it on 2 the disk, and watching it at a later time of 3 the user's convenience. And I'm trying to 4 recall what the typical delay was or whether 5 there was a range of delays and I'm sorry, I 6 can't recall those details. 7 BY MR. WILLIAMS: 8 Q. Okay. So, other than the work 9 at Replay, did you have any other industry 10 experience with time shifting video products? 11 A. I didn't have industry 12 experience, per se, as such. I did have some 13 designation experience later. 14 Q. By later, you're talking about 15 after you began your expert consulting work? 16 A. Yes. 17 Q. I'm going to ask you to turn to 18 Exhibit 2006. And in particular I want to 19 ask about Paragraph 21. 20 A. Yes. 21 Q. You there use this word POSITA, 22 P-O-S-I-T-A. Do you see that? 23 A. Uh-huh. 24 Q. And that's an acronym for Person	Page 28 1 when you talk about a POSITA, you're talking 2 about POSITA as defined in the petitioner's 3 documents? 4 A. That certainly was the 5 intention. 6 Q. Okay. Okay. I'm going to 7 show -- this doesn't have an exhibit number 8 on it, but it is a paper in the proceeding. 9 It's entitled Petition For Inter Parties 10 Review of U.S. Patent Number 8,929,710. 11 A. Uh-huh. 12 Q. Are you familiar with this 13 document? 14 A. It's a document I have seen. 15 Q. On Page 14 there was a heading 16 entitled Level of Ordinary Skill in the Art. 17 Do you see that? 18 A. Okay. I see it. 19 Q. So, is this the description on 20 Page 14 of the petition of the level of 21 ordinary skill in the art, is that the 22 description you used in your analysis? 23 A. It very probably was and it is a 24 reasonable definition.

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1 Q. Okay. Now, what is the time
2 period that we're talking about in connection
3 with your declaration's view of the POSITA?
4 A. Well, the appropriate time
5 period really should be around the priority,
6 earliest priority date of the patent. And I
7 think I have somewhere in my declaration,
8 perhaps I referred to that or perhaps in
9 counsel's petition there should somewhere be
10 a comment about the earliest priority date.
11 Q. So, if you -- do you have
12 Exhibit 2006?
13 A. Yes.
14 Q. Could you turn to Paragraph 24,
15 there should be a date?
16 A. Yes. I see it.
17 And so the time period that it
18 discusses there is 2010.
19 Q. Okay. So, the definition of --
20 okay. By the way, let's clean up one other
21 thing. The petition that I gave you defines
22 this as a person of ordinary skill in the art
23 and it abbreviates it P-O-S-A.
24 A. Uh-huh.

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1 Q. You used the abbreviation
2 POSITA, but those two terms mean the same
3 thing; correct?
4 A. They are intended to mean the
5 same thing.
6 Q. So, you agree then that the
7 definition of a POSITA or POSA given in the
8 petition is a reasonable one to use as of
9 2010; is that correct?
10 A. It's reasonable -- if I had
11 edited this document myself, I would have
12 usually added that more -- that additional
13 experience could substitute for education and
14 vice versa. That statement is not present
15 and I would normally add it to this.
16 Otherwise, it is a reasonable statement.
17 Q. And did you qualify as a POSITA
18 under this definition in 2010?
19 A. Yes.
20 Q. Okay. What was the two years of
21 relevant industry experience you would have
22 pointed to to satisfy this definition?
23 A. I think by that time I would
24 have probably had close to ten years of

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1 experience.
2 In particular, I think I would
3 have pointed out my time from Optivision in
4 say 1995. I believe I mentioned 1994
5 earlier. It had slipped my memory
6 specifically as to the date. 1995 through to
7 certainly 2002.
8 And so by 2010, I would have had
9 at least -- at least seven years' experience.
10 Now, I would add to this
11 experience, I would add to this experience
12 all of the subsequent experience I've had in
13 working with images and imaging systems. But
14 nonetheless, by 2010, looking at it in the
15 narrowest possible way, I would have had no
16 less than seven years' experience and I would
17 have argued 15, taking into account my
18 experience working with imaging.
19 Q. One of the years you answered in
20 that answer was through 2002. It appears
21 that in at least through October of 2002, you
22 were working with a company called Media
23 Logic Systems. Is that right?
24 A. That's correct.

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1 Q. And was the work at Media Logic
2 Systems, you think, relevant to this
3 definition of a POSITA?
4 A. Certainly.
5 Q. Can you just briefly explain
6 what it is you were doing at Media Logic that
7 you think would be relevant to this
8 proceeding?
9 A. Okay. My role at Media Logic
10 Systems was a chief systems engineer.
11 I was focused on designing and
12 architecting a novel live interactive
13 television system for video enabled call
14 centers. This really required a knowledge of
15 a cable company network and architectures.
16 I was also tasked with
17 developing a similar project for a PC, which
18 required knowledge of imaging, imaging,
19 coding, delivering digital programs and
20 network architectures.
21 And so that is the primary --
22 primary relevance.
23 Q. You said video enable call
24 center. So would that be, the video that you

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1 were talking about here, would that be like a
2 tele presence sort of video streaming?
3 A. Yes. It was -- it was
4 essentially a tele presence approach to sales
5 and providing information.
6 Q. Okay. Did that project involve
7 time shifting of video?
8 A. Not that I recall.
9 Q. Okay. We just had a discussion
10 about the level of skill in the art as you
11 used that term in Exhibit 2006.
12 Were you applying the same
13 understanding for your analysis as shown in
14 Exhibit 2008?
15 A. As I said, that is my intention.
16 I also said that if I had drafted that
17 paragraph myself, I would have added the
18 phrase that more experience -- that
19 experience and education can substitute for
20 each other or some paragraph to that effect.
21 Q. And the relevant time period
22 that we're talking about for your analysis in
23 Exhibit 2008 is still roughly the same,
24 correct, in 2010 time period?

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1 A. Correct.
2 Q. All right. I want to talk about
3 the '710 patent for a bit. And that is in
4 your Exhibit 2006. Will you address that?
5 A. Sure.
6 MR. CARR: Just to clarify, I
7 think he meant to say the '710 patent. It's
8 not Dr. Freedman's '710 patent.
9 THE WITNESS: I think he's
10 referring to the declaration related to the
11 '710 patent. We can correct that on the
12 record. Am I right in saying that you're
13 thinking about Exhibit 2006?
14 BY MR. WILLIAMS:
15 Q. Yes. I'm thinking about Exhibit
16 2006 which is where you explained your
17 analysis of the '710 patent; correct?
18 A. Correct.
19 Q. Okay. We should probably get
20 you the '710 patent.
21 I'm going to hand you what's
22 been previously marked as Exhibit 1001.
23 A. Uh-huh.
24 Q. Take a moment and just confirm

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1 you recognize that document.
2 A. It appears to be the document we
3 have previously termed the '710 patent.
4 Q. Okay. And you're familiar with
5 this patent; correct?
6 A. It's a document I've reviewed.
7 Q. The -- did you review it as part
8 of your preparation for today's deposition?
9 A. Correct.
10 Q. Okay. Do you have an
11 understanding of what is inventive about the
12 '710 patent?
13 MR. CARR: Objection to form.
14 THE WITNESS: Well, to
15 understand what's inventive, the best way is
16 really to look at the claims.
17 So, what is claimed is an
18 apparatus with independent claim one. Also a
19 method independent claim nine. And an
20 apparatus in independent claim 18.
21 And it relates to a DVR system
22 for time shifting a portion of the
23 transmitted video program. And among other
24 things, refers to a first and second command

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1 that initiates playback of that video program
2 or a portion of that video program, depending
3 on the playback state and depending on a
4 period of time.
5 BY MR. WILLIAMS:
6 Q. While we're here, why don't we
7 mark the other patent or I should say hand
8 you the other patent that's already been
9 marked.
10 I'm handing you a document
11 that's also been marked Exhibit 1001, but
12 this one is patent 9,538,122.
13 Let me know if you recognize
14 this document?
15 A. It appears to be the document we
16 have previously referred to as the '122
17 patent.
18 Q. Okay. And you're familiar with
19 this document then; correct?
20 A. It's a document I've reviewed.
21 Q. Again, is this a document you
22 reviewed in preparing for today's deposition?
23 A. Yes.
24 Q. Okay. On the front page of the

Page 37 1 '122 patent, halfway down the left column 2 there's a section called Related U.S. 3 Application Data. 4 Do you see that? 5 A. Yes. 6 Q. It says this document is a 7 continuation of, and then it goes on to say 8 patent number 8,929,710. 9 Do you see that? 10 A. I see that. 11 Q. Do you have an understanding of 12 what that language means? 13 A. Only by virtue of being licensed 14 as a registered patent agent. The 15 continuations are continuations in part and 16 assuming that it is a continuation that after 17 '710 was filed, and perhaps even after it was 18 granted, there may have been additional 19 claims and I'm trying to recall. It is so 20 long ago that I thought of these things, 21 whether or not additional disclosure was 22 permitted. 23 Q. Have you compared the two patent 24 specifications to see if any disclosure was	Page 39 1 differences is first to focus on the claims 2 and any differences between the claims. 3 So, whether it's the preamble of 4 claim one in '710 refers to time shifting, at 5 least a portion of transmitting video program 6 in '122 refers to time shifting, at least one 7 video program, said video program transmitted 8 over data distribution system. 9 And I'm not going to at this 10 time discuss whether it's limiting or not. 11 But it seems to refer to more details of the 12 claims -- the claims seem to refer to more 13 details of the system with elements such as a 14 tuner, which does not appear to be -- oh, 15 yes. There is indeed an element in claim one 16 of '710. 17 So, '122 also discusses 18 auxiliary and time-shifted data. And the 19 time shifting of both the -- both the 20 video -- both the video program and 21 auxiliary -- auxiliary and time shifted data 22 and auxiliary seems here to relate to 23 additional information such as interstitial 24 commercial information or other information
Page 38 1 added in the '122 patent? 2 A. No, I haven't done that myself. 3 I would typically look for the patent's 4 prosecution history to see what was 5 different; if one was a continuation of the 6 other, there should be some record in the 7 prosecution history. 8 Q. Have you reviewed the 9 prosecution histories of these two patents? 10 A. I reviewed the prosecution 11 history at least superficially. The 12 prosecution histories tend to be very long 13 and detailed. I do not recall if I reviewed 14 every document in the history or not. 15 Q. What's your understanding of 16 what the difference is between the '710 17 patent and the '122 patent? 18 MR. CARR: Objection to form. 19 MR. WILLIAMS: Let me withdraw 20 the question. 21 What differences, if any, exist 22 between the '122 and the '710 patent? 23 THE WITNESS: Again, the best 24 place, in my view, to look at these	Page 40 1 that is intended to be presented along with 2 the -- with the time-shifting video program. 3 I am looking at '710 to see if 4 the claims refer to the auxiliary data or 5 make any statement about an element of 6 auxiliary data. 7 I do see that dependent claim 8 three refers to primary and secondary video 9 content. And it's display with a DVR are in 10 various playback states. 11 So, there's not a lot of 12 difference between these two. 13 Q. When you said auxiliary data, 14 was that, were you referring to something in 15 the claims of the '122 patent? 16 A. I'm referring to statements that 17 are made in the disclosure and -- the claims 18 referred to a plurality of video programs. 19 And disclosure refers to auxiliary data, 20 auxiliary and time-shifted data. 21 I'm looking at the claim of '122 22 to see if the term auxiliary data is used as 23 an element everywhere -- I'm sorry, anywhere 24 in those claims.

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1 So, I see only the statements
2 about plurality of video programs. This is
3 clearly making claims about more than one --
4 more than one video program and perhaps some
5 of those programs can be assigned to the
6 auxiliary information.
7 Q. So, in the claims of the '122
8 patent, you saw a reference to plurality of
9 video programs and you didn't see that in the
10 claims of '710.
11 Do I have you right?
12 A. So far as I can see, the claims
13 in '710 refers to a video program and doesn't
14 appear to refer to a plurality of programs.
15 Q. But it's also correct that the
16 '122 patent claims do refer to a plurality of
17 video programs; correct?
18 A. Yes.
19 MR. WILLIAMS: We've been going
20 for about an hour. Good time for a short
21 break?
22 THE WITNESS: Good idea.
23 MR. WILLIAMS: Off the record.
24 - - -

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1 (Whereupon, there was a recess
2 commencing at 10:08 a.m. and concluding at
3 10:18 a.m.)
4 - - -
5 BY MR. WILLIAMS:
6 Q. Are you aware that the parties
7 to this inter parties review proceeding are
8 also involved in a district court litigation?
9 A. I was informed by retaining
10 counsel only yesterday.
11 Q. You learned that yesterday.
12 Okay.
13 Have you reviewed any documents
14 from that litigation?
15 A. I don't recall doing so.
16 Q. Have you been told that the
17 parties have proposed various claim terms for
18 construction in that litigation?
19 A. Not since I've reviewed no
20 documents from that litigation, and I don't
21 recall any conversation about it, except from
22 simply being told it existed last night. I
23 haven't heard that information.
24 Q. Okay. So, it's fair to say you

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1 didn't -- you haven't considered any
2 information about that litigation in the
3 course of preparing your opinions in this
4 case. Is that correct?
5 A. That's correct.
6 Q. Okay. Okay.
7 In your Exhibit 2006, you have a
8 section called claim construction that begins
9 at Paragraph 46 that I want to ask you some
10 questions about. Let me know when you find
11 that.
12 A. Yes, I see it.
13 Q. Okay. Paragraph 87 you give an
14 opinion about the meaning of the term first
15 period of time; is that correct?
16 A. Let's take a look.
17 Q. Sorry. I might have misspoke.
18 I see the court reporter wrote down 87. I
19 meant Paragraph 47.
20 A. I see that.
21 Q. What's your understanding of
22 what the term first period of time is used in
23 the claims means?
24 MR. CARR: Objection to form.

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1 THE WITNESS: Paragraph 47 makes
2 a statement that in my opinion, a POSITA
3 would interpret the first period of time to
4 start after transmission of the entire video
5 program to the DVR based on the claim
6 language.
7 BY MR. WILLIAMS:
8 Q. One of the basis you have for
9 that statement, you put towards the end of
10 this paragraph, I'll just read it, In order
11 to provide said video program in its entirety
12 from said memory device, the entire video
13 program must be stored in the memory device,
14 which is only possible after transmission of
15 the entire video program to the DVR.
16 Do you see that sentence?
17 A. I see that sentence.
18 Q. You believe that to be true,
19 that sentence; correct?
20 A. Correct.
21 Q. All right. Why do you say
22 that's only possible after transmission of
23 the entire video program?
24 A. Based on the plain reading of



Page 45 1 the claim language, the video program is 2 providing entirety from the memory device and 3 so if the entire program is provided from the 4 memory device, the simplest interpretation 5 from, according to my opinion, is that the 6 program must have been stored completely in 7 the memory device. And therefore, the only 8 way that the entire program can be stored in 9 memory device is if the entire video program 10 was -- has already been transmitted to the 11 DVR. 12 Q. So, in your view then this 13 claim -- claims that include this term 14 wouldn't cover a situation where the time 15 shifting is occurring during transmission of 16 the program. Is that correct? 17 MR. CARR: Objection to form. 18 THE WITNESS: In a sense, it's a 19 compound question. That relates to both time 20 shifting and the transmission and in my view 21 the simple answer is no, it doesn't relate to 22 the time shifting, not in the first period of 23 time. 24 In other words, the simplest	Page 47 1 has a buffer which stores only one minute of 2 video? 3 MR. CARR: Objection to form. 4 THE WITNESS: Could you please 5 explain -- Counsel, could you please explain 6 the relevance of this question? 7 BY MR. WILLIAMS: 8 Q. I'm asking if this opinion 9 you're reaching in 47, Paragraph 47 is based 10 on a technical infeasibility or if it's based 11 solely on the language of the claim. That's 12 what I'm trying to probe. 13 A. Okay. It's primarily focused on 14 the plain reading, plain and simple reading 15 of the claim language. 16 Q. So it's not that it's 17 technically infeasible to stream an entire 18 video program without storing the entire 19 program first in this memory; correct? 20 A. You're using the term stream. 21 And you really haven't defined that term 22 stream. 23 And so many types of -- many 24 types of systems are technically feasible,
Page 46 1 reading of the claim language is that the 2 entire video program is stored in the memory 3 device and the entire video program has been 4 transmitted to the DVR and the time shifting 5 does not take place during that first period 6 of time. 7 Q. So when you say that first 8 period of time, you mean the period of time 9 during which the program is being transmitted 10 to the set top box and stored in its memory? 11 A. Paragraph 47 makes it very clear 12 that the first period of time starts after 13 the entire video program is transmitted to 14 the DVR. 15 So, the sequence of events is 16 the entire video programming is transmitted 17 to the DVR, stored in the memory device and 18 the first period of time that is referred to 19 in the claims starts after that time point. 20 Q. So, let me ask you a question 21 about the technical feasibility of a 22 different approach. 23 Is it possible to stream a 24 30-minute video program to a computer that	Page 48 1 but for the system of -- of the '710 patent, 2 I believe that is the simplest and clearest 3 interpretation of the claim language and I 4 believe it is not appropriate for us to 5 speculate on alternative technical systems 6 that are not what is disclosed and 7 particularly not what is claimed in the 8 patent. 9 Q. Let me ask you about the 10 disclosure then. 11 Is it your view that the '710 12 patent doesn't disclose the system it's 13 capable of transmitting the entirety of the 14 program to a DVR without first storing the 15 entirety of that program in the memory of the 16 DVR? 17 MR. CARR: Objection to form. 18 THE WITNESS: So, let's look at 19 the actual disclosure of the '710 patent. We 20 can look at different parts of the 21 disclosure, starting with the abstract and 22 the abutments that are explicitly disclosed. 23 It discloses requiring data at 24 or around the time the time shifting data is

Page 49 1 displayed and an alternative abutment 2 disclosing a system with auxiliary data is 3 removed after the value has diminished. 4 So, I do not want to import 5 limitations from the specification into the 6 claims. Correct me if I'm wrong, but I 7 believe that that is not appropriate. 8 But in terms of what is 9 explicitly disclosed, Column 3 refers to an 10 embodiment in which data received by tuner is 11 provided by decoder where the data is 12 processed. The process data can be stored in 13 memory so it can be displayed at a future 14 time. 15 In another embodiment in the 16 same column, it refers to request to play 17 data in response to accessing program data 18 from memory. It also refers to alternate 19 embodiment which program data is written 20 purality of segments and axillary data is 21 played between the segments. Again starting 22 in Column 3, around Line 61, is description 23 of preferred embodiment of the invention. 24 And time shifted data that is accessed from	Page 51 1 that my reading of '710 suggests that it is 2 not inconsistent with a system that could 3 stream in real-time a 30-minute program with 4 a computer that has a computational system 5 that has a one-minute buffer, but that is not 6 what is being claimed in the claims. 7 Q. Okay. Thank you. 8 In Paragraph 49, you discuss the 9 prosecution history. 10 Do you see that? 11 A. Yes, I do. 12 Q. Can you explain to me what it is 13 about the prosecution history that you 14 believe supports your opinion? 15 A. So, the patentee explained to 16 the examiner that the invention is directed 17 to a DVR that stores a video program and 18 plays back at least a portion of the video 19 program at a later time. 20 And also, that if the video 21 program is being watched within the first 22 period of time, within a day or two of the 23 video program being transmitted to the DVR, 24 that is after it has been transmitted in its
Page 50 1 memory. 2 In Column 5, it's disclosed a 3 DVR includes a buffer that buffers data that 4 can be reviewed -- viewed in real-time. Time 5 shifting made by a couple of seconds. It 6 refers also to auxiliary data that can be 7 received in real-time or received and stored. 8 So, in terms of the technical 9 disclosure, I think that the system does 10 not -- that the disclosure did not exclude 11 the display of real-time information that had 12 been buffered for a short period of time. 13 You referred to a 30-minute program with a 14 one-minute buffer. I think this is still 15 consistent with a disclosing embodiments. 16 Though one is speaking in the claims about 17 specific claims in which time-shifted data is 18 accessed from memory. And the information in 19 Paragraph 47 refers to the language of the 20 claims. 21 Counsel, does that answer your 22 question? 23 Q. I'm not sure. 24 A. More specifically, I'm stating	Page 52 1 entirety to the DVR, then it will be played 2 back in its entirety including the program 3 data. 4 Therefore, the patentee clearly 5 intended the first period of time to start 6 after transmission of the entirety of the 7 program. 8 Q. So the first underlined passage 9 reads, Stores a video program and plays at 10 least a portion of the video program back at 11 a later time. (e.g., a time more convenient 12 to the user.) 13 Correct? 14 A. That's what it says. 15 Q. So, why does later time have to 16 mean after the program has been completely 17 recorded? 18 A. We should read the patentee's 19 explanation in full, rather than attempt to 20 dissect portions of this statement. 21 Only a few lines later, about 22 eight lines later, the patentee says, To this 23 end, the claimed invention provides that if 24 the video program is watched within the first

Page 53 1 period of time, e.g., within a day or two of 2 the video program being transmitted to the 3 DVR, then the video program will be played 4 back in its entirety. 5 So, this clearly creates the 6 nexus between the first period of time and a 7 time period that is after the video program 8 has been transmitted to the DVR. 9 So, taking this communication 10 with the examiner as a whole, there's really 11 no doubt that the first period of time starts 12 after the entire video program has been 13 transmitted. 14 Q. If you turn to Paragraph 51. 15 A. Yes. 16 Q. There you're discussing a first 17 command. Is that right? 18 A. It does speak about a first 19 command. 20 Q. And that command changes the DVR 21 from a first playback state to a second 22 playback state; correct? 23 A. Yes. 24 Q. Okay. What's your understanding	Page 55 1 specifically refers to a state in which the 2 DVR is playing the program. The first 3 playback state may be a state in which the 4 DVR is not playing the program. 5 BY MR. WILLIAMS: 6 Q. You're saying that the second 7 playback state is one where it is playing and 8 the first is one where it's not playing. Is 9 that right? 10 A. That's my reading. 11 Q. Okay. If you could turn -- do 12 you have Claim 1 of the '710 patent in front 13 of you? 14 A. Yes. 15 Q. The bottom of Column 11, 16 there's an element that begins, At least one 17 processor configured to. 18 Do you see that? 19 A. Yes. 20 Q. There's two little Romanette -- 21 well, in that, there's three Romanettes in 22 that element. I want to ask about Number 2. 23 A. Correct. 24 Q. So, as I understand (ii), it's
Page 54 1 of what playback state means in the context 2 of the claims? 3 MR. CARR: Objection to form. 4 THE WITNESS: Well, we should 5 really look to the patent for the term 6 playback state. 7 So, it appears to me that 8 playback state refers to the DVR as a state 9 machine, for example, that it is executing a 10 process of playing back. There seemed to be 11 other disclosures that relate to rewinding or 12 time shifting. And I believe that these 13 correspond to the traditional states of a DVR 14 where you may have a rewind, you may have a 15 pause, you may have a state that is playing 16 and possibly other states as well. 17 BY MR. WILLIAMS: 18 Q. In the context of these claims, 19 what's your understanding of what the 20 difference is between the first playback 21 state and the second playback state? 22 MR. CARR: Objection to form. 23 THE WITNESS: Well, it's -- it 24 seems that the second playback state most	Page 56 1 describing a first playback state where the 2 video is being played back to the user. 3 Have I got that wrong? 4 A. My reading is that -- is that 5 the DVR is providing the video program in its 6 entirety to the display device, that is 7 displaying it on a device; in response, 8 during a second period of time where the DVR 9 is in the first playback state, meaning that 10 the action taken by the DVR when receiving 11 the second command, or a second command, 12 depends on the first playback state. 13 So, an example in my view could 14 be that the DVR is not playing the program 15 data. A second command is received and it 16 starts -- it transitions to a second playback 17 state in which it is playing the program in 18 its entirety. 19 Q. So, that answer discussed a 20 second command and suggested to me that the 21 second command transitions the device between 22 playback states. Is that how you understand 23 this claim to work? 24 A. Yes.

Page 57 1 Q. So, what does the first command 2 do? 3 A. I believe that was discussed in 4 my declaration, again, 47. The first command 5 sets the playback state of the DVR. 6 Q. I understood your last answer to 7 say that the second command did that. 8 A. The first command sets a 9 playback state. The second command causes 10 the transitioning of the DVR from the first 11 playback state to the second playback state. 12 And then the second playback state the video 13 program is being displayed. 14 Q. Can the video program be 15 displayed in both the first and second 16 playback states? 17 A. Well, reading the claim 18 language, and referring to my declaration in 19 Paragraph 51, the first command never 20 initiates playback of the video program in 21 independent Claim 1. Otherwise, the claim 22 would be illogical. 23 So, the first playback state is, 24 in my opinion, a state where the DVR is not	Page 59 1 command is received during the first period 2 of time, the DVR will change to a state in 3 which it is playing. 4 Q. Is that state that you're 5 describing still the first playback state? 6 A. In my view, it isn't. 7 On the -- on the other hand, the 8 claim does say that if the second command is 9 received during the first period of time, it 10 doesn't matter what the playback state is of 11 the DVR. 12 And what I'm -- I do not want to 13 implicitly read any limitations into this 14 that aren't present. 15 But for concrete example to fix 16 our thinking, the first playback state may be 17 one in which the DVR is stopped or where it 18 is paused and a second playback state may be 19 one in which the DVR is playing. And while 20 those are not the only possible states of a 21 DVR, it may fix our thinking a little more 22 clearly, though those limitations cannot be 23 imported into the claims. 24 Q. The first sentence of your
Page 58 1 playing. And the second playback state, in 2 my view, is a state in which the DVR is 3 playing. 4 Q. So, referring back to what I 5 described as Romanette Number 2 then, how can 6 the program be provided in its entirety to 7 the display device in the first playback 8 state if what you just said is true? 9 A. Let's be very careful how we 10 read the claims. In Romanette 1 the process 11 is configured to provide the video program in 12 its entirety to a display device in response 13 to receiving a second command regardless of 14 the playback state, if a second command is 15 received during the first period of time. 16 Meaning regardless of what the 17 first playback state is, provided the second 18 command is received during this first period 19 of time, which we have been discussing, the 20 video program would be displayed in its 21 entirety. 22 But in my view, the consequences 23 that although the first playback state is one 24 where it is not playing, that if the second	Page 60 1 Paragraph 51 discusses both the first command 2 and a second command; correct? 3 A. Yes. 4 Q. And I think your next sentence, 5 you state that, This requires two distinct 6 commands. 7 Is that right? 8 A. Yes. 9 Q. Can you explain what you mean by 10 distinct commands? 11 A. The commands must be distinct 12 from each other in the plain being the work 13 distinct. 14 Q. Does that mean, so for instance 15 could a single command perform both the 16 functions of the first command and the second 17 command and be within the scope of this 18 claim, in your view? 19 A. No. 20 Q. So, that is the sense you're 21 using the word distinct, to mean that they 22 have to be two entirely different 23 interactions by the user? 24 A. We really can't, in my view,

Page 61 1 import interaction with the user into this. 2 We're not speaking about users anywhere in 3 this. We're speaking about commands and 4 we're speaking about states. 5 Q. It might help if you have the 6 claim language up next to your declaration of 7 the '710 patent. 8 I want you to look carefully at 9 the claim language element beginning A 10 controller. 11 A. Ah, yes. The commands are from 12 a user. 13 Q. Okay. So with that 14 understanding, looking back now on what you 15 say in Paragraph 51, then I want to confirm, 16 when you say it requires two distinct 17 commands, are you saying that those have to 18 be two separate user interactions? 19 A. In my view, yes. 20 Q. Okay. Now I want to ask you 21 about -- so, the claims use the term first 22 and second to describe the commands. In your 23 view, does that require a temporal 24 connection? In other words, does the first	Page 63 1 it. 2 Q. What if the user is required to 3 take some further action after pressing that 4 button but before playback commences, would 5 you still say that that button push you've 6 described is initiating playback? 7 MR. CARR: Objection to form. 8 THE WITNESS: I believe in the 9 context of these patent claims, the 10 initiation of the playback process is 11 contemporaneous with the system receiving 12 that second command from the user. 13 BY MR. WILLIAMS: 14 Q. Did you say contemporaneous? 15 A. It starts when -- when that 16 command is received. 17 Q. So essentially simultaneous -- 18 close to simultaneous as possible? Is that 19 what you're suggesting by contemporaneous? 20 A. From the perspective of the 21 user, he pushes that button or presses 22 something on a remote control and playback 23 starts. 24 From the perspective of the
Page 62 1 command have to come before the second 2 command? 3 MR. CARR: Objection to form. 4 THE WITNESS: I believe that a 5 strict reading of the claims does not 6 necessarily identify which is the first or 7 the second command in terms of temporal 8 relationship; just that they are different 9 commands. 10 However, if we think about the 11 operation of the device, the first command is 12 one that sets the playback state and the 13 second command is the one that initiates the 14 playback and the first and second periods of 15 time are relevant to the consequences of the 16 first and the second command. 17 BY MR. WILLIAMS: 18 Q. What do you mean there by 19 initiates playback? 20 A. The command that initiates 21 playback provided by user may be something as 22 simple as pressing -- pressing a play button 23 or providing that command to the system 24 through some other means of interaction with	Page 64 1 system developer, there may be other 2 technical processes that happen on a scale of 3 milliseconds or microseconds that happen 4 inside the system. 5 Q. Getting back to this temporal 6 aspect we were getting back to a moment ago, 7 I'm not entirely sure I understand your 8 answer. I want to get clarification. 9 Is it -- so is it possible to be 10 within the scope of this claim if what's 11 described in the claims is the first command 12 comes second and what's described as the 13 second command comes first? 14 MR. CARR: Objection to form. 15 THE WITNESS: These are two -- 16 these are two separate, really two separate 17 questions. 18 One is a question of labeling of 19 the commands and the second is a question of 20 the ordering of the commands. 21 BY MR. WILLIAMS: 22 Q. What I'm trying to focus on is 23 the ordering. The claim labels the commands, 24 first commands and second commands.

Page 65 1 A. Yes. 2 Q. I'm sort of stuck with using 3 those labels in describing the question I'm 4 trying to put to you. 5 The question is fairly 6 straightforward in focusing on the temporal 7 aspect. 8 Can what the patent describes as 9 the first command come second and what it 10 describes as the second command come first? 11 MR. CARR: Objection. 12 BY MR. WILLIAMS: 13 Q. And still be within the scope of 14 the claims? 15 A. Well, let's think about the 16 operation of the DVR or what a POSITA would 17 think is reasonable for the operation of the 18 DVR. 19 The DVR, initially in this state 20 of not playing and it's been placed by a 21 command, a user command, it then transitions 22 to a state of playing, where the playback is 23 initiated by another user command. And it 24 appears to me that what is labeled with a	Page 67 1 Q. Do you agree with that sentence? 2 A. I agree that that is what that 3 states. 4 Q. Do you agree that what you state 5 in that sentence is true? 6 A. Yes. 7 Q. Is it your view that the claims 8 say that the DVR must determine whether the 9 second command was received during the first 10 period of time? 11 A. Well, if the DVR does not 12 determine whether, example, the second 13 command was received during the first period 14 of time, how can its state be definite? How 15 can it be known what it does? Otherwise, the 16 state of the DVR and indeed the claim would 17 be indefinite. 18 Q. So, this determination that 19 you're suggesting is required, can you 20 explain what that would require of the 21 processor? 22 MR. CARR: Objection to form. 23 THE WITNESS: It would require 24 some determination of time relative to --
Page 66 1 second command must be temporally later than 2 the first command. 3 MR. WILLIAMS: Why don't we take 4 a break. 5 - - - 6 (Whereupon, there was a recess 7 commencing at 11:04 a.m. and concluding at 8 11:11 a.m.) 9 - - - 10 BY MR. WILLIAMS: 11 Q. Turn in Exhibit 2006 to your 12 Paragraph 69. Let me know when you find that 13 paragraph. 14 A. Yes, I found the paragraph. 15 Q. Okay. In this paragraph, you 16 state in the last sentence that a POSITA 17 would understand that the DVR must determine 18 whether the second command initiating 19 playback was received during the first period 20 of time in order to determine whether the 21 user is restricted from skipping the claimed 22 second portion during playback. 23 Is that correct? 24 A. That's what's stated.	Page 68 1 relative to the timing of the first command 2 at the very least. How a first period of 3 time could -- could be predefined such as 4 five minutes, 20 minutes, something like 5 that, in my view it would be defined relative 6 to the timing of the first command and so the 7 processor would need some type of clock to 8 make that determination. And of course most 9 processor have some kind of clock. 10 BY MR. WILLIAMS: 11 Q. Let me ask you to turn to 12 Paragraph 79. 13 A. I see Paragraph 79. You're 14 referring to Exhibit 2006; correct? 15 Q. Correct, yes. Here you're 16 discussing Russ. Is that right? 17 A. Well, Paragraph 79 discusses 18 Russ, but it also makes statements about 19 Casagrande. Sure. 20 Q. Russ is one -- Russ is one of 21 the prior references you reviewed; right? 22 A. Correct. 23 Q. You say that in Russ, it's the 24 tag that determines whether a commercial can

Page 69 1 be skipped. 2 Is that right? 3 A. Yes. 4 Q. Then in the last sentence you 5 say, Thus, like Casagrande, the determination 6 of whether a commercial can be skipped is not 7 based on time, but on the specific commercial 8 or the tag associated therewith. 9 Is that correct? 10 A. Yes, I made that statement. 11 Q. So, the tag, as you say, has an 12 expiration date; correct? 13 A. Yes, it does. 14 Q. And so why is what -- why is the 15 description in Russ, that this tag with an 16 expiration date, not sufficient to meet the 17 claims, in your opinion? 18 A. Well, it's not specifically 19 based on time since the first command. 20 It's an absolute expiration 21 date, which in principle could be never. 22 So, the difference here, in my 23 view and to provide a concrete example, just 24 to focus our thinking, and not as a	Page 71 1 clearly explained in Paragraph 103, that Dow 2 discloses a simple toggle for whether the 3 commercial advance feature is enabled. 4 When the feature is enabled, the 5 commercials will be skipped regardless of the 6 play mode selected. 7 So, this does not disclose first 8 or second commands or playback states or even 9 time; just the commercial content is labeled 10 as to whether by a toggle as to whether it 11 can be skipped or not. 12 And when it's enabled, 13 commercials that it detects with its 14 luminance based algorithm get skipped. 15 Q. Now, you agree with me that Dow 16 would not be able to skip a commercial if a 17 user was watching the program in real-time; 18 correct? 19 A. Do you have a copy of the Dow 20 patent? 21 Q. Sure. I'll just point out that 22 you also discuss it at Paragraph 111 of your 23 declaration. 24 A. I understand that. I prefer to
Page 70 1 limitation, is in Russ, the commercial can be 2 skipped after May the 1st at midnight, but 3 the claims refer to -- that refer to time 4 relate to time since the first command. 5 So, is that first command given 6 11:55 on May the 1st? Was it given on April 7 the 1st? So, the principle is different. 8 Russ relates to an absolute date and '710, in 9 my reading, appears to be based on time since 10 the first command was given. 11 Q. In the first command, you're 12 talking about is the claimed first command; 13 correct? 14 A. Correct. 15 Q. Let me ask you to turn to 16 Paragraph 101 of your declaration, 2006. 17 A. Yes. I have that. 18 Q. Okay. The first sentence is 19 that Dow is fundamentally different than the 20 claimed invention of the '710 patent. 21 Do you see that? 22 A. Yes. 23 Q. Can you explain how? 24 A. So, Dow discloses, it's more	Page 72 1 look directly at the patent before I answer. 2 Q. I'm handing you what's been 3 marked as Exhibit 1007 which is Patent Number 4 7,251,413. 5 A. So, if I recall your question 6 related to whether the disclosure of Dow 7 supported skipping commercials during 8 playback. Is that correct? 9 Q. What -- the question I was 10 asking -- I'll reask the question. 11 Do you agree with me that Dow 12 would not enable a user to skip a commercial 13 if they were watching a program in real-time? 14 A. Well, real-time itself is a 15 concept that may need further definition, 16 however, from the user's standpoint, if they 17 are watching a streamed program, my 18 impression is that if Dow's commercial 19 advance toggle is toggled on, then the 20 detection of the commercial events can take 21 place in real-time or at a time that is 22 appropriate for that detection. 23 And the user would be able to 24 skip the commercials while it is being played

Page 73 1 back in inverted quotes, real-time. 2 Q. So, what do you make of this 3 section of Dow on 24, line -- Column 24, Line 4 43, you reproduce it in your declaration in 5 Paragraph 11, that the commercial skip is 6 always inactive in live view mode or delayed 7 view mode where there is insufficient time to 8 buffer and process events for identifying 9 commercial groups? 10 A. I see it and I understand it. 11 Then again, this comes down to 12 the definition of real-time. 13 Typically a POSITA would think 14 of real-time as an appropriate level of time 15 that has unfortunately no numerical 16 limitation on how real the time has to be. 17 The statement that is stated 18 there relates to buffers of less than two 19 minutes because presumably the capabilities 20 of Dow's -- Dow's system. 21 But that two-minute buffer could 22 be considered liable real-time by the user, 23 if that's appropriate for the user. 24 As to when a user would feel	Page 75 1 Q. Do you have an understanding of 2 what Dow meant by live view? 3 MR. CARR: Objection to form. 4 THE WITNESS: My reading is that 5 the term live view has the same meaning as 6 real-time for that purpose. 7 This is opposed to where the 8 program is stored for an appreciable length 9 of time and then played back from the DVR at 10 a later time and as to exactly what that time 11 period is, is not precisely specified, but 12 according to Dow's disclosure, a two-minute 13 buffer appears to be adequate. 14 And so I will contend that short 15 periods -- short delays of up to two minutes 16 or two minutes or slightly more than two 17 minutes would be considered both real-time 18 and live view, according to Dow's disclosure. 19 BY MR. WILLIAMS: 20 Q. Now, Dow describes the 21 commercial or commercial groups being skipped 22 by the user. 23 Is that right? 24 A. Well, Dow describes the command
Page 74 1 that it is not real-time, colloquially we 2 might imagine days or weeks or even hours or 3 tens of minutes as to not feel like 4 real-time, but that is entirely subjective 5 and there is no formal definition of 6 real-time. 7 Q. Well, would Dow be able to skip 8 a commercial that hasn't been transmitted to 9 the user yet? 10 A. It depends where the tagging is 11 taking place. If the tagging is taking place 12 in Dow's -- in Dow's user premises DVR, then 13 the answer I think is no. 14 Q. Just to follow up on that, when 15 you say tagging, you're talking about 16 detection of the commercial? 17 A. I'm talking -- I'm talking about 18 the detection of the commercials -- the 19 detection of the commercial that's being 20 performed by processes that's occurring 21 within Dow's disclosed DVR at the user 22 premises, that if a commercial had not yet 23 been transmitted, then it couldn't be 24 detected.	Page 76 1 from the user to enable commercial skipping. 2 So, it's a good question of when that command 3 is initiated. Could that command in Dow's 4 system be provided by the user before the 5 video program is received? I don't see 6 anything in Dow's disclosure that would lead 7 me to believe that that command could not be 8 given before the commercial content or before 9 the video program was received. 10 So, the user can say skip 11 commercials on Monday and on Wednesday the -- 12 when the video program is received, the 13 commercial program is skipped just to provide 14 a concrete example to fix our imagination. 15 Q. What would the user experience 16 be of skipping the commercial in Dow? What 17 would they be presented with on the 18 television screen, on the display? 19 A. In my view, they would, if the 20 commercials were skipped, they would receive 21 video that they would perceive as continuous. 22 Now, the word continuity itself can be a 23 challenge because as it's common knowledge, 24 not only of POSITA's, but all users, there

Page 77 1 are scene changes in video streams and the 2 perception of continuity does include the 3 user comprehending scene changes or changes 4 of camera angle and so forth, but 5 nonetheless, the user may perceive the 6 display program to entirely relate to the 7 video content and not to extrinsic commercial 8 content. 9 Q. Let's turn to the -- your other 10 declaration for a moment, Exhibit 2008. 11 A. Okay. 12 Q. This is your declaration 13 relating to the '122 patent you have in front 14 of you now; correct? 15 A. It appears to be. 16 Q. Here I want to ask you a 17 question about Miller. 18 A. Uh-huh. 19 Q. Why don't we just give him a 20 copy of Miller. 21 A. I would like to take a very 22 short break, a bio break. 23 MR. WILLIAMS: Sure. We can do 24 that now. Let's go off the record.	Page 79 1 Q. Unfortunately, it's a relatively 2 long paragraph and we don't have line 3 numbers. But I'm down over halfway through 4 that paragraph and it just above the page 5 where Paragraph 48 appears. The sentence 6 says some embodiment. 7 Do you see that? 8 In some embodiments, multiple 9 additional programs may be concurrently 10 recorded or otherwise utilized while 11 recording the first program is being 12 presented. 13 Did I read that accurately? 14 A. Yes. 15 Q. Okay. So, in view of that, why 16 is it that you conclude Miller disclose only 17 recording one program? 18 A. That, from this exposure, Figure 19 5 in Miller, where it says initiate recording 20 of received program content corresponding to 21 a second program of the plurality of 22 programs. 23 So, one of these plurality 24 programs is recorded according to the flow
Page 78 1 - - - 2 (Whereupon, there was a recess 3 commencing at 11:42 a.m. and concluding at 4 11:48 a.m.) 5 - - - 6 BY MR. WILLIAMS: 7 Q. Okay. So, I was going to ask 8 you about Paragraph 61 of your declaration, 9 Exhibit 2008. 10 A. Yes. 11 Q. And during the break, I put in 12 front of you a copy of the document marked 13 Exhibit 1009, which is a publication, 14 2009/0165057 from the U.S. Patent Office. 15 You've got that in front of you now. 16 I want to ask you about the 17 sentence on Paragraph 61 where you say Miller 18 discloses recording only one program, not a 19 plurality, i.e., more than one. 20 Do you see that? 21 A. I see that. 22 Q. Okay. Now, in Miller, if you 23 turn to Paragraph 44. 24 A. I see Paragraph 44.	Page 80 1 chart in Figure 5. 2 Looking at now at 44 -- to the 3 plurality video programs are required to be 4 transmitted in the same time, and received by 5 received, that contains a tuner. 6 So, if we look at Paragraph 44, 7 it does say that multiple additional programs 8 may be concurrently recorded, but it doesn't 9 specifically disclose that they are obtained 10 by a tuner that on a single channel that 11 receives them. 12 So, maybe there could be 13 multiple tuners that receive or tuner cans 14 that receive multiple. 15 (Reporter clarification.) 16 This is a term of art; referring 17 to tuner devices that can be tuned to 18 different frequencies and receive multiple 19 programs. But it doesn't specifically 20 explicitly disclose that the additional 21 programs are received on a single channel, 22 single frequency by a single tuner. 23 Q. But you don't disagree that Russ 24 has -- I'm sorry, that Miller has a tuner

Page 81 1 that can receive multiple programs 2 simultaneously or do you? 3 A. Well, let's see precisely how 4 this is worded. It does refer here to 5 residual bandwidth of a carrier signal. 6 So, your question really relates 7 to the way television tuners work and 8 normally, they are tuned primarily to a 9 signal -- single channel or single frequency 10 and they receive information on that single 11 channel. 12 There is a concept of 13 multi-plexing and I don't see a clear, 14 explicit disclosure that relates to 15 multi-plexing the programs on or -- on a 16 single channel of defined frequency. 17 Q. Can you turn to Paragraph 29 of 18 Miller for a moment? 19 A. I see it. 20 Q. First two sentences read, as 21 noted above, the signal received by the 22 receiving device 118 may include a plurality 23 of multi-plexed programs. In particular, a 24 plurality of programs may be communicated as	Page 83 1 discussion of a single carrier signal, that 2 would suggest one channel; correct? 3 A. Not necessarily, no. 4 And this relates more to the 5 technology of signal transmission. 6 So, there are many ways to do 7 this. I don't want to go into many details, 8 spread spectrum is one of them, as is used in 9 many telephony devices. 10 There are other ways of 11 multi-plexing the signal in terms of not only 12 frequency but phase, the so-called quadrature 13 amplitude modulation, constellation and so 14 on. 15 But typically, the tuner selects 16 one of those at one time to view or record. 17 Q. In your view, what does the term 18 single channel in the claims of the '122 19 patent mean? 20 A. To me, it means the selection of 21 a specific frequency from the carrier signal 22 and a specific element of the multi-plex 23 constellation of signals. 24 Q. And do you agree with me that
Page 82 1 a plurality of program content streams that 2 are multi-plexed upon a single carrier 3 signal. 4 Do you see that? 5 A. I see that. 6 Q. In your view, is that a 7 disclosure of a multi-plexing of multiple 8 programs onto a single channel? 9 A. Onto a single carrier signal. 10 Now, the distinction here is what we mean by 11 channel. And channel usually refers to a 12 specific frequency. So, the carrier signal 13 may span a range of frequencies, and indeed 14 almost always does, if programs can be multi 15 pledged onto it, but the tuner is 16 typically -- we're not speaking about 17 receiver here. We're speaking about the 18 tuner specifically, is typically tuned to a 19 single one of those frequencies, a single 20 channel at any time; even though there may be 21 multiple programs broadcast on the carrier 22 signal at different frequency to which the 23 tuner can be tuned at a later time. 24 Q. The sentences that I read, the	Page 84 1 the disclosure of Miller discloses 2 transmitting a plurality of video program on 3 a single channel? 4 A. It is transmitting plurality of 5 video programs on a single carrier signal and 6 we're distinguishing here between a carrier 7 single, which literally has bandwidth, 8 meaning covers many frequencies and 9 multi-plexing typically means, in digital 10 television, it typically refers to using 11 different phases, that is, temporal 12 relationships within the signal, within the 13 carrier signal, to be modulated to carry 14 information, corresponded to channels. 15 So the carrier signal that you 16 receive in your cable television set top box, 17 to fix our imagination again with a concrete 18 example is you may find perhaps a Disney ABC, 19 ESPN and Fox all transmitted in one 20 constellation on a single carrier signal that 21 you receive from the cable system; yet each 22 of these would be described as different 23 channels. 24 Q. Is it your view then that that

Page 85 1 view of multi-plexing is what is being 2 disclosed in Miller? 3 A. It is my view. 4 Q. Let me ask you to look at 5 Paragraph 32 of Miller. 6 A. I see it. 7 Q. I think it's the third sentence 8 of that paragraph reads, a content stream 9 selector may comprise, for example, a tuner 10 configured to tune a particular -- tune to a 11 particular frequency that is used to carry 12 program content. 13 Do you see that? 14 A. Yes, I see that. 15 Q. Is that the type of tuner that 16 you think is within the scope of the claims 17 of the '122 patent? 18 MR. CARR: Objection to form. 19 THE WITNESS: In my view, that 20 would be how a POSITA would read it. 21 BY MR. WILLIAMS: 22 Q. Okay. Now, I have one more 23 series of questions, but I'm going to be 24 finished.	Page 87 1 these two declarations? 2 A. If you're asking whether they 3 are -- whether they are consistent, I believe 4 they are consistent, but they are tailored to 5 the specific -- to the -- to the specific 6 patent '122. And to the specific combination 7 of the prior art. 8 Q. What's your understanding of the 9 difference in the combinations of prior art 10 between the two proceedings? 11 A. Well, it is driven -- it's 12 driven by the claims of the patents. 13 We were discussing some hours 14 ago about the distinction between the claims 15 of the '122 and '710 patents, if I recall. 16 And one of the things that we 17 discussed is the question of plurality of 18 programs. 19 Q. Right. And I certainly agree 20 with you that that is a distinction. 21 Are there any other distinctions 22 between the two declarations that you recall? 23 A. Well, I would -- I don't like to 24 do these things from memory. I would have to
Page 86 1 A. Uh-huh. 2 Q. I don't know whether we'll be 3 able to accomplish it before lunch, but let's 4 try. 5 Your declaration, Exhibit 2008, 6 covers Miller but it also obviously addresses 7 Casagrande, Russ and Dow that we spoke about 8 earlier this morning. 9 Do you recall that? 10 A. Yes. 11 Q. I guess my question to you is: 12 Is there anything in your analysis in Exhibit 13 2008 regarding Casagrande, Russ and Dow that 14 is subjectively different in your analysis of 15 those references in your declaration 16 regarding the '710 patent? 17 A. I'm not sure I understand the 18 question. Please could you clarify what you 19 mean by substantially different? They -- the 20 analyses refer to different patents. 21 Q. Right. So, what I'm asking is, 22 is your -- is your analysis of those three 23 references we spoke about, Russ, Casagrande 24 and Dow, substantively different between	Page 88 1 compare the -- so, Page 23 in Exhibit 2006 2 and Page 25 in Exhibit 2008 speak about the 3 claim first command. 4 So far as I can tell, according 5 to the box on those pages, the only 6 difference that I see is in Exhibit 2006, the 7 audio interface 1518 is explicitly mentioned 8 and it is not mentioned or cited at all in 9 the corresponding box on Page 25 of Exhibit 10 2008. But they are nonetheless technically 11 consistent. 12 And indeed we could go through 13 the declarations page by page and analyze 14 whether there are differences. 15 But in my view, the analysis 16 is -- was intended to be and is consistent 17 with them and also consistent with the goal 18 of -- of -- of supporting the claims of the 19 respective patents. 20 Q. In terms of your testimony this 21 morning, regarding the different commands in 22 the claims of the '710 patent, do you believe 23 that testimony would apply as well to the 24 claims of the '122 patent?

Page 89 1 A. Let's look at the claims of the 2 '122 patent in detail. In particular, in 3 looking at Column 10, Column 12 around Line 4 10, the statements about the first and second 5 command appear to apply equally to both 6 patents. 7 Q. And I have the same question 8 about the time periods. 9 Do you think the testimony you 10 gave this morning regarding the various time 11 periods and the claims of the '710 patent 12 would be equally applicable to the time 13 periods that were cited in the claims of the 14 '122? 15 A. Yes, I do. 16 And the claim explicitly states, 17 Claim 1 explicitly states that the second 18 period of time is a period of time after the 19 first period of time. 20 Q. That's true in both patents; 21 correct? 22 A. I think it is. Let me just 23 check to be sure. I just want to be 24 absolutely sure of the statements I make.	Page 91 1 MR. CARTER: I would say rough 2 and seven-day delivery. 3 - - - 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Page 90 1 Yes, indeed. It is present in 2 Claim 1 or both. So, yes, the analysis 3 applies. 4 Q. All right. And part of that 5 analysis that we talked about this morning in 6 the '710 patent had to do with your view 7 of -- your view that the claims of the '710 8 patent require a determining to be performed. 9 Would that testimony you gave apply equally 10 to the claims of the '122 patent? 11 A. Yes. 12 Q. At any time today did you 13 discuss the substance of your testimony with 14 anyone? 15 A. Absolutely not. 16 MR. WILLIAMS: Give me one 17 minute. 18 No further questions. 19 MR. CARR: Nothing from patent 20 owner. 21 THE COURT REPORTER: Would you 22 like a copy of the transcript? 23 MR. CARR: Yeah. Rough and 24 regular, please.	Page 92 1 C E R T I F I C A T E 2 3 I hereby certify that the proceedings 4 and evidence noted are contained fully and 5 accurately in the notes taken by me on the 6 deposition of the above matter, and that this 7 is a correct transcript of the same. 8 9 10 11 12 <i>Teresa M. Beaver</i> 13 ----- 14 Teresa M. Beaver 15 DATE: April 29, 2024 16 17 18 (The foregoing certification of this 19 transcript does not apply to any reproduction 20 of the same by any means, unless under the 21 direct control and/or supervision of the 22 certifying shorthand reporter.) 23 24