

1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3
4 YEALINK (USA) NETWORK
5 TECHNOLOGY CO., LTD.,
6 and YEALINK NETWORK
7 TECHNOLOGY CO., LTD.,

8 Petitioners,

9 vs.

10 BARCO N. V.,

11 Patent Owner.

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)
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)
)
) IPR2024-01439

) U. S. Patent No.
) 11,422,951
)
)
)

12 The virtual deposition of MICHAEL C.

13 BROGIOLI, Ph.D., called by the Petitioner for

14 examination, pursuant to Notice, and pursuant to the

15 applicable rules, taken stenographically by Sandra

16 L. Rocca, CSR, RMR, RDR, CRR, via Zoom, on the 16th

17 of September, 2025, at the hour of 7:28 a.m.

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25 Certification No. 084-003435

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I N D E X

WITNESS	PAGE
MICHAEL C. BROGIOLI, Ph.D.	
EXAMINED BY	
Mr. Greenleaf	4

E X H I B I T S

NUMBER		PRESENTED
Exhibit 1005	U.S. Patent Application Publication 2005/0210390 (Ono)	16
Exhibit 1008	U.S. Patent Application Publication 2011/0096138 (Grimshaw)	15
Exhibit 2004	M. Brogioli, Ph.D. Declaration	7

(Exhibits not attached)

1 MICHAEL C. BROGIOLI, Ph.D.,
2 having been first duly sworn, was examined and
3 testified as follows:

4 CROSS EXAMINATION

5 BY MR. GREENLEAF:

6 Q Good morning, Dr. Brogioli.

7 A Morning.

8 Q How are you?

9 A I'm doing well.

10 Q Good to hear. Today we're going to be
11 talking about IPR2024-01439. Is that your
12 understanding?

13 A It is, yes.

14 Q Okay. So last week -- well, let's see here.
15 Last week we talked about situations in which
16 Barco's product would not allow additional devices
17 to display onto a screen.

18 Do you recall that discussion?

19 MR. ANDREWS: Objection, form.

20 A Yes, I recall us talking about, if I'm
21 remembering right, having some upper limit on the
22 number of devices that could simultaneously display
23 and what the behavior might be under those
24 conditions, as I generally remember.

25 Q So in some situations, Barco's product would

1 not cause media to be transferred when the user
2 clicked the button on the dongle, correct?

3 A If I remember, under this upper limit
4 condition, the user trying to share content received
5 a like a pop-up dialogue window saying something to
6 the effect of the limit had been reached. And
7 either they wouldn't -- either their content
8 wouldn't be shared or I think if they held the
9 dongle button down for two seconds, their content
10 would take over the display in a single display --
11 or sort of in a single display panel scenario, as I
12 remember.

13 Q Are there other scenarios in which Barco's
14 product may fail to transfer data from the computer
15 to the screen when the user presses the button on
16 the dongle?

17 MR. ANDREWS: Objection, scope.

18 A Not that I remember being asked to look at
19 or not that I addressed. I think it would be in
20 sort of last section of my '951 declaration here.

21 Q What if there was also interference in the
22 frequency band that 802.11 operates in, would that
23 potentially cause problems with Barco's system
24 working?

25 MR. ANDREWS: Objection, scope.

1 A I don't know. I mean, I would say if -- you
2 know, if there were 802.11 interference happening,
3 it would cause wireless transmission problems, you
4 know, just in a wireless environment in general.

5 Q And Barco's system operates in the same
6 frequencies -- let me just ask the question a
7 different way.

8 Barco's ClickShare product works in the
9 2.4 gigahertz spectrum for 802.11, is that correct?

10 A That sounds like it's correct. I know the
11 Barco literature that maybe we looked at some point
12 last week talks about the fact that it uses
13 different versions of 802.11.

14 Q Yeah, it could be 2.4 or it could be the
15 5 gigahertz spectrum, right?

16 A That's -- that sounds right going from
17 memory.

18 Q And if there is interference in whichever
19 spectrum the ClickShare product is operating in,
20 that might cause it to not function correctly,
21 correct?

22 MR. ANDREWS: Objection, scope.

23 A I guess I would answer similar to before, I
24 mean, if -- if there were such wireless interference
25 or such a hostile wireless environment that 802.11

1 wasn't working, I guess the Barco system may also
2 suffer some performance issues.

3 Q I'm going to -- do you have your declaration
4 in front of you, right?

5 A I do, yes.

6 Q Let's go to paragraph 81 of your
7 declaration.

8 A Okay.

9 (Document marked previously as
10 Exhibit 2004 was presented.)

11 BY MR. GREENLEAF:

12 Q And then the sentence that goes from pages
13 32 -- page 32 to page 33 says, "But Dr. Almeroth
14 does not explain how the projector of the combined
15 system would navigate multiple competing or
16 conflicting commands from different communication
17 modules."

18 Do you see that?

19 MR. ANDREWS: Objection, form.

20 A I do. I see that sentence, yes.

21 MR. GREENLEAF: Sorry, what was the
22 objection?

23 MR. ANDREWS: Form.

24 BY MR. GREENLEAF:

25 Q Does the '951 patent disclose or explain how

1 the projector would navigate multiple competing or
2 conflicting commands from different communication
3 modules?

4 A I'm just taking a second to read this, I
5 guess this paragraph and the one before. That last
6 sentence I'm referring to the challenges that arise
7 in Dr. Almeroth's combination whereby there are now
8 multiple of these Ono-style remotes in the system
9 making what are these competing or conflicting
10 commands and it's not -- or he doesn't explain how
11 that proposed system is supposed to handle that
12 situation.

13 Q Okay. So it's your opinion that
14 Dr. Almeroth's proposed combination of Ono and
15 Corbett is to provide multiple Ono-style remotes, is
16 that correct?

17 A That part of his combination is taking that
18 remote of Ono and putting it into these
19 communication modules, so effectively having
20 multiple of these remotes that perform this
21 selection functionality now distributed throughout
22 the system.

23 Q So the system described in the '951 patent
24 includes multiple dongles, correct?

25 A That's correct.

1 Q But the '951 patent also does not describe
2 how to handle conflicts between different
3 communication modules or dongles, correct?

4 MR. ANDREWS: Objection, form.

5 A Well, it describes a system whereby -- go
6 back to the '951 for you -- where those dongles have
7 the button or accuator on them and then the user
8 pressing them triggers this transfer of the media
9 content.

10 Q I'd like to turn your attention to
11 column 22, lines 42 to 50 of the '951 patent.

12 A Okay.

13 Q And this talks about a scenario similar to
14 what we were discussing at the beginning of this
15 deposition and what we discussed last week. Would
16 you please read that paragraph. You don't need to
17 read it out loud. Just let me know when you're
18 done.

19 A Okay. Okay.

20 Q So do you agree with my assessment that this
21 paragraph is relevant to the discussion we had
22 earlier about whether the limit was reached in the
23 number of devices that can be displayed at one time?

24 A Give me one second. It looks like this
25 paragraph at 42 is stating a user with a dongle in a

1 connected state, a pressing of the button and if the
2 base unit's not in a state of what's called "full"
3 here in 45, then the arbitrary media content or the
4 screen scraped media content -- it said adds the
5 media content to the composition of a central
6 display. It doesn't actually say what happens if it
7 is in full, but it sounds like it's checking for
8 that condition.

9 Q What do you think the system would do if the
10 base unit is in the full state?

11 MR. ANDREWS: Objection, scope.

12 A I don't see that it says here one way or the
13 other, at least in this paragraph and I was skimming
14 the one a couple before it and the one after it.
15 That may be something that -- well, maybe it's
16 elsewhere in the '951 if you wanted to point me
17 there, but that may be something that the inventors
18 left open to an implementer or implementer's
19 decision or choice.

20 Q Wouldn't one choice be to not send the
21 screen scrape data when the base unit is full?

22 A I guess that could be -- based on what this
23 paragraph is saying and the fact that it to me seems
24 silent on this condition of when the state is full,
25 that could possibly be one design decision.

1 Q So I'd like to look at claim 1 of the '951
2 patent. Does claim 1 limit the type of connection
3 between the peripheral device and the processing
4 device?

5 A I don't see that claim 1 is specific on the
6 a connection between the peripheral and the
7 processing device, in that it's not saying, for
8 instance, it must be, you know, parallel connection
9 or a paired wire or low voltage connection or
10 something like that.

11 Q Or a serial connection, for example?

12 A Right. I don't see that either.

13 Q Does claim 1 limit the location of the input
14 device?

15 MR. ANDREWS: Objection, form.

16 A I see that claim 1 mentions the input device
17 and as I recall, the specification talks about some
18 rough approximate physical dimensions, I think in
19 millimeters of that input device. But I don't see
20 that claim 1 is saying it must be at this specific
21 XY coordinate or something like that or XYZ
22 coordinate, I guess.

23 Q Claim 1 says, "the input device being a
24 physical actuator coupled to the at least one
25 peripheral device," correct?

1 A I see that at the top of column 28, yes.

2 Q And then let's look at claim 11.

3 A Okay.

4 Q And in the middle of the claim it says,
5 "wherein the at least one peripheral device is a
6 connection unit comprising."

7 Do you see that?

8 MR. ANDREWS: Objection, form.

9 A I'm sorry. I thought you said claim 11.
10 Maybe I misheard.

11 Q I'm sorry. Claim 9.

12 A Okay. Can I hear the question again?

13 Q Yes, yes. The middle of claim 9 says,
14 "wherein the at least one peripheral device is a
15 connection unit comprising"?

16 A I see that.

17 Q And then it's an (a) and (b), a connector
18 and a transmitter?

19 A I see that.

20 Q And then the input device is not necessarily
21 part of the peripheral device of claim 9, correct?

22 MR. ANDREWS: Objection, scope.

23 A I see that claim 9 discusses at 54 the one
24 peripheral device being a connection unit and then
25 has the limitation (a) at line 56 and (b) at 59, and

1 then at 62 describes an input device. And I don't
2 -- at least for this claim, I don't see that it's
3 saying the input device is -- it's just describing
4 the input device, to answer it a little differently.

5 Q And it doesn't require a specific location
6 of the input device in the media tool, correct?

7 MR. ANDREWS: Objection, form, scope.

8 BY MR. GREENLEAF:

9 Q Let me ask the question in a different way.
10 The claim does not require a specific
11 location of the input device in the electronic
12 meeting tool, correct?

13 MR. ANDREWS: Objection, scope.

14 A I see that it's just saying that there's an
15 input device and that it has to allow for the user
16 to carry out that user action on the input device.
17 But I don't see that it's saying a specific physical
18 location that this must -- this input device, you
19 know, must reside within the other component of the
20 claim.

21 Q Let's look back at claim 1 of the '951
22 patent. And it recites an electronic meeting tool
23 including, amongst other things, a base node, a
24 peripheral -- and a peripheral device, correct?

25 A That's correct.

1 Q Does the claim require more than one
2 peripheral device?

3 MR. ANDREWS: Objection, scope.

4 A The way I see the claim written is it says
5 at least one peripheral device.

6 Q So a system comprising a base node and one
7 peripheral device and only one peripheral device,
8 that means all of these limitations would infringe
9 this claim 1, correct?

10 MR. ANDREWS: Objection, form.

11 A It sounds like you're describing the
12 scenario that I used in my testing that I discuss in
13 the declaration, so that would meet the limitations
14 of the claim.

15 Q And you've heard the phrase that which comes
16 earlier anticipates and that which comes later
17 infringes. Have you heard that phrase before?

18 A Possibly. I don't know if maybe exactly
19 that language, but I may have.

20 Q So a similar system with only one peripheral
21 device and a base node that came earlier than the
22 priority date of the '951 patent would anticipate
23 claim 1, correct?

24 A Not necessarily, no. I mean, if a system
25 prior to the priority date of the patent did exactly

1 what claim 1 is describing, that would sound like a
2 scenario of anticipation, but claim 1's more than
3 just the existence of a base node and a peripheral
4 device.

5 Q All right. Let's look at Grimshaw which is
6 Exhibit 1008 in this proceeding. Do you have a copy
7 of that, Dr. Brogioli?

8 A I do, one moment.

9 Q If anybody needs a copy, let me know.

10 (Document marked previously as
11 Exhibit 1008 was presented.)

12 BY MR. GREENLEAF:

13 Q I assume you have Grimshaw open,
14 Dr. Brogioli?

15 A Yes.

16 Q I'll throw a couple other exhibits in here
17 for Ms. Rocca's purposes.

18 Last week we spoke about these buttons in
19 Grimshaw 344, 356, 364 and 374. Do you recall that
20 discussion?

21 A At a high level, yes.

22 Q And when a user presses one of these
23 buttons, it causes the information on their screen
24 to be displayed on the main display of Grimshaw,
25 correct?

1 MR. ANDREWS: Objection, form.

2 A As I recall us talking about the buttons of
3 Grimshaw control the switch which would -- if
4 user 2, for example, hit their button, the intent is
5 for their content to be displayed.

6 Q Let's look at Ono again, Figure 1 which
7 includes projector 60. I'm sorry. Yeah, projector
8 60.

9 Do you see projector 60 on Figure 1 of Ono?

10 A I do.

11 (Document marked previously as
12 Exhibit 1005 was presented.)

13 BY MR. GREENLEAF:

14 Q And the projector and screen are a form of
15 display, correct?

16 A Not in terms of the display of the -- or the
17 language of the '951. In Ono, 60 is a projector
18 that's projecting an image up onto a surface 50 of
19 Ono.

20 Q But according to the language of the '951,
21 the display may be a projector and screen, correct?

22 A Going back to the '951. So I -- I think I
23 discuss this around paragraph 94 and 95 in my
24 declaration where in Ono, this -- excuse me, this
25 control section is, as we see in Ono's projector

1 box 60, it's on that left-hand side as we talked
2 about before, and that this is a projector, not a
3 display as we had been talking about before. So in
4 certain places, the '951 does talk about -- and I
5 think it's somewhere in the background, they're
6 talking about projectors and things like that and
7 cabling requirements.

8 Q And the claimed display may be a projector
9 and screen, correct?

10 A I see that it's talking about that, probably
11 in column 14, I guess the sentence starting at 60
12 where at the end of around 63, "and one display or
13 projector or multiple displays or projectors 44 in
14 the meeting room 50."

15 Q If you look at lines 37 to 39, it explicitly
16 states that the display 44 may be a projector and
17 screen, correct?

18 A I see that. The dis -- I lost my place. At
19 line 37, "the display 44 may be a projector and
20 screen, the projector being coupled to the base node
21 36."

22 Q But you still believe that Ono's projector
23 and screen are not a display, is that correct?

24 MR. ANDREWS: Argumentative.

25 A Well, I'll take us back to my paragraph 35

1 [sic] of my declaration where in Dr. Almeroth's --
2 the way he's annotated the figures, that this
3 control section of his combination of I believe Ono
4 and maybe Ono and Corbett in this section, that the
5 control section is -- I guess I'm on the fourth line
6 down -- the control section is part of the
7 projection, not the image display apparatus, that
8 the projector is not a display, that here in this
9 combination is the projector projects an image onto
10 the screen. So it's not -- his combination's not
11 describing -- in this paragraph I'm referring to a
12 base node that's integrated into the display.

13 MR. GREENLEAF: Okay. Let's take a
14 five-minute break. Make sure -- let me review the
15 transcript and come back and I don't think we're
16 going to need to go very long today.

17 (Short recess.)

18 BY MR. GREENLEAF:

19 Q In paragraph 42 of your report, you talk
20 about it teaches away. Do you see that?

21 Did we get an answer to that question,
22 Dr. Brogioli? Did you hear?

23 A I was just saying I saw the paragraph. I
24 didn't know if there was another question.

25 Q Okay. So paragraph 42 talks about teaching

1 away, correct?

2 A That's correct.

3 Q As does paragraph 43, correct?

4 A That's correct.

5 Q Are any of the positions that you've taken
6 in your declaration based on teaching away?

7 MR. ANDREWS: Objection, form.

8 A I think I would need to go back and look for
9 you, just as I'm not -- between the four different
10 declarations we've talked about in the last week or
11 so, there's a lot of material in there for me to
12 remember.

13 Q So paragraph 109, for example -- well, let's
14 look at a different one. Let's look at 134. You
15 talk about centralization, also paragraphs 136 and
16 137 and I'll give you a minute to look at those.
17 Just let me know whether you -- my question is
18 whether they discuss centralization?

19 A Okay. Okay, yes, I do see that paragraphs I
20 guess 134 through about 137 talk about this concept
21 for centralized architecture and that being somewhat
22 based around the remote, et cetera.

23 Q So your argument is that Uchida teaches away
24 from decentralization?

25 MR. ANDREWS: Objection, form.

1 A Well, Uchida talks about the singular point
2 of control as part of what the goals of Uchida's
3 invention are. And the centralized architecture of
4 Uchida lends itself to that and achieves that. And
5 so the person of skill wouldn't look to
6 fundamentally change the architecture of Uchida's
7 system when considering this combination that
8 Dr. Almeroth proposed.

9 Q So is it your position that Uchida teaches
10 away from decentralization?

11 MR. ANDREWS: Objection, form.

12 A I would say that in the sense of a POSITA
13 looking to Uchida and the notion of fundamentally
14 changing its architecture to something that's this
15 distributed shared architecture would be a reference
16 that would be teaching away from what Uchida is
17 teaching in its invention and how it goes about
18 achieving that.

19 Q You also understand that the combination of
20 known elements using known methods yielding
21 predictable results would render a claim obvious,
22 correct?

23 MR. ANDREWS: Objection, form.

24 A That sounds at least similar language to
25 what I discuss earlier in my declaration and my

1 understanding.

2 MR. GREENLEAF: All right. No further
3 questions. Mr. Andrews, do you have any redirect?

4 MR. ANDREWS: Can we just take a brief
5 minute?

6 MR. GREENLEAF: Sure.

7 (Short recess.)

8 MR. ANDREWS: We're going to have no further
9 questions.

10 MR. GREENLEAF: Thank you, Dr. Brogioli.

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12 (Time Noted: 8:18 a.m.)

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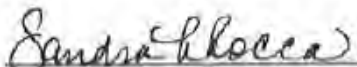
C E R T I F I C A T E

I, Sandra L. Rocca, CSR, RMR, RDR, CRR, a
Certified Court Reporter within and for the States
of Illinois and Florida, do hereby certify:

That MICHAEL C. BROGIOLI, Ph.D., the witness
whose deposition is hereinbefore set forth, was duly
sworn by me and that such deposition is a true
record of the testimony given by such witness.

I further certify that I am not related to
any of the parties to this action by blood or
marriage; and that I am in no way interested in the
outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my
hand this 16th of September, 2025.



Sandra L. Rocca, CSR, RMR, RDR, CRR

IL License 084-003435

Florida 1245

Illinois, D.C. and Florida Notary

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CERTIFICATE OF DEPONENT

I hereby certify that I have read the foregoing pages of my deposition testimony in this proceeding, and with the exception of changes and/or corrections, if any, find them to be a true and correct transcription thereof.

Deponent

Date

NOTARY PUBLIC

Subscribed and sworn to before me this _____ day of _____, 20__.

Notary Republic

My Commission Expires: _____

1 INSTRUCTIONS TO WITNESS

2

3 Please read your deposition over carefully
4 and make any necessary corrections. You
5 should state the reason in the appropriate
6 space on the errata sheet for any corrections
7 that are made.

8 After doing so, please sign the errata
9 sheet and date it.

10 You are signing same subject to the changes
11 you have noted on the errata sheet, which
12 will be attached to your deposition.

13 It is imperative that you return the
14 original errata sheet to the deposing
15 attorney within thirty (30) days of
16 receipt of the deposition transcript by
17 you. If you fail to do so, the deposition
18 transcript may be deemed to be accurate
19 and may be used in court.

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