UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NINTENDO CO., LTD, and

NINTENDO OF AMERICA INC.,

Petitioners,

v.

AMERICAN GNC CORPORATION,

Patent Owner.

_____

IPR2024-00667

(Patent 6,508,122 B1)

IPR2024-00668

(Patent 6,671,648 B2)

_____

DEPOSITION OF

HIRAM McCALL

WOODLAND HILLS, CALIFORNIA

FRIDAY, MARCH 14, 2025

Reported by: Aileen Neitzert, CSR No. 5318

Job No.: 575114

1 DEPOSITION OF HIRAM McCALL, taken on behalf of
2 the Petitioners, at 6320 Canoga Avenue, 15th Floor,
3 Woodland Hills, California, beginning at 1:03 p.m., on
4 Friday, March 14, 2025, before Aileen Neitzert,
5 Certified Shorthand Reporter No. 5318.
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1 Friday, March 14, 2025; 1:03 p.m.
2 Woodland Hills, California
3 - - -
4 THE REPORTER: My name is Aileen Neitzert. My
5 CSR number is 5318.
6 HIRAM McCALL,
7 having first been duly sworn by the reporter,
8 was examined and testified as follows:
9 EXAMINATION
10 BY MR. LAUPPE:
11 Q. Hello, Mr. McCall. My name is Patrick Lauppe,
12 and I'm here on behalf of petitioners today. Thank you
13 for taking the time to sit with us today. Just to
14 start out with some basic matters, have you been
15 deposed before?
16 A. Yes.
17 Q. How many times have you been deposed before?
18 A. At least once.
19 Q. Ballpark, do you generally know how many times
20 you've been deposed otherwise or --
21 A. Just leave it at once.
22 Q. Okay. Gotcha.
23 A. Years have gone by.
24 Q. When were you deposed before?
25 A. This was in 2011.

1 Q. And what was the proceeding that deposition was
2 related to?
3 A. It was related to a patent, and the people who
4 were calling for the deposition were, like, Furuno
5 radar, guides for boats, and they had somebody else
6 there, too, that were all asking questions. And I
7 don't know exactly what the legal proceeding was, quite
8 frankly, but it was -- it was under subpoena, and they
9 did tape the testimony. Marine radar it was.
10 Q. And did that relate to a patent on which you
11 are an inventor?
12 A. Yes, it did.
13 Q. Do you recall what the patent was that
14 proceeding related to?
15 A. I actually can't remember which one it was back
16 in -- it's been so many years.
17 Q. Who was the plaintiff in that matter?
18 A. I don't remember that one either.
19 Q. Gotcha. You say it was for -- it related to
20 Furuno radar. Were they accused to infringing one of
21 your patents?
22 A. Yes, they were.
23 Q. But you don't know, sitting here today, who was
24 suing them, basically?
25 A. No.

1 Q. Gotcha. Did you testify at trial in that
2 matter?
3 A. No, I did not.
4 Q. And was that a district court proceeding? Let
5 me rephrase. Was that an IPR proceeding, like the
6 present ones we're discussing today?
7 A. Not that I know of, but, there again, I can't
8 say that I know the answer to that.
9 Q. Gotcha. Did you submit a declaration in that
10 proceeding?
11 A. No, I did not.
12 Q. Did you submit an expert report?
13 A. No, I did not.
14 Q. Gotcha. But you were being deposed as the
15 inventor on the asserted patent; is that right?
16 A. Yes.
17 Q. Okay. Have you ever been deposed in the
18 context of an IPR proceeding before?
19 A. No.
20 Q. Have you ever submitted a declaration in an IPR
21 proceeding before?
22 A. No.
23 Q. And have you ever submitted a declaration in
24 any legal proceeding previously?
25 A. To the best of my knowledge, proceedings I have

1 been involved in, it has not been declaration that I
2 submitted.
3 Q. Have you ever submitted an expert report in a
4 legal proceeding?
5 A. No.
6 Q. Okay. How did you prepare for today's
7 deposition?
8 A. Well, I spent some time reviewing the
9 declaration.
10 Q. Did you review any other documents in
11 preparation for today's deposition?
12 A. From time to time I have gone back and reviewed
13 my patents, just read through excerpts from some of the
14 patents.
15 Q. And the patents you're referring to, are those
16 U.S. Patent Number 6,508,122, or the '122 patent, and
17 U.S. Patent Number 6,671,648, or the '648 patent?
18 A. That's correct.
19 Q. And so if I refer to those as the '122 patent
20 and the '648 patent today, will you understand?
21 A. That's fine.
22 Q. Okay. Did you meet with anyone in preparation
23 for today's deposition?
24 A. I have been having consultation with Corey.
25 Q. And Corey is counsel, correct?

1 A. Correct.
2 Q. Approximately how long did you meet with
3 Mr. Johanningmeier?
4 A. Three hours.
5 Q. And just to clarify, by "Mr. Johanningmeier"
6 I'm referring to Corey. Is that --
7 MR. JOHANNINGMEIER: That's me.
8 BY MR. LAUPPE:
9 Q. Just want to make it clear. You said about
10 three hours?
11 A. Yes.
12 Q. Okay. Did you review any documents in your
13 time meeting with Mr. Johanningmeier?
14 MR. JOHANNINGMEIER: Just before you go on, I
15 just want to caution you for privilege purposes where I
16 think we draw the line is you can answer that yes or
17 no, but I think the particular documents that you
18 reviewed would be off limits, so just wanted to caution
19 you not to reveal any -- content of any discussions
20 that we had.
21 THE WITNESS: The answer is yes.
22 BY MR. LAUPPE:
23 Q. Are you being compensated for your time in
24 connection with these IPR proceedings?
25 A. No.

1 Q. And when I refer to "these IPR proceedings" or
2 "the IPR proceedings," do you understand I'm referring
3 to IPR2024-00667 and IPR2024-00668?
4 A. I'm not familiar with the legal way of
5 describing what these things are, so...
6 Q. Understood. I'm just going to -- I'm going to
7 introduce an exhibit. This is your declaration in the
8 two IPR proceedings that we're discussing today and --
9 MR. JOHANNINGMEIER: This will be Exhibit 1?
10 MR. LAUPPE: I'm just going to keep the exhibit
11 number of --
12 MR. JOHANNINGMEIER: Oh.
13 MR. LAUPPE: -- in the proceeding, so this will
14 be Exhibit 2023.
15 MR. JOHANNINGMEIER: Sorry.
16 MR. LAUPPE: No, that's all right.
17 (Exhibit 2023 was marked for identification.)
18 BY MR. LAUPPE:
19 Q. So, Mr. McCall, if you could just look at the
20 top of this declaration, at the top right hand corner,
21 do you see where it says "IPR2024-00667" and IPR --
22 well, "2024-000668." Do you see that?
23 A. I see that.
24 Q. And do you understand those are the proceedings
25 that we're discussing today?

1 A. Yes.
2 Q. Okay. And so if I refer to "these proceedings"
3 or "the IPR proceedings" or "the present proceedings,"
4 do you understand I'm referring to those IPR
5 proceedings?
6 A. Yes.
7 Q. Okay. Do you have a financial interest in the
8 outcome of the dispute between American GNC and
9 Nintendo?
10 A. No, I do not.
11 Q. And so turning, again, to your declaration,
12 Exhibit 2023 in these proceedings, did you draft
13 Exhibit 2023?
14 A. I myself did not do the original draft.
15 However, there was working with -- with Corey. There
16 was material presented. There was presentation of a
17 draft that was made, and then that was exchanged back
18 and forth several times to do editing and bring it to a
19 final version. And I was pretty meticulous going
20 through all the information in here, and it's
21 satisfactory at this point.
22 Q. And generally -- sorry. Just to make sure my
23 terminology is all clear, if I refer to the 667 IPR
24 proceeding, you understand I'm referring to the IPR
25 proceeding related to the '122 patent?

1 A. Yes.
2 Q. And if I refer to the 668 proceeding, do you
3 understand I'm referring to the IPR proceeding related
4 to the '648 patent?
5 A. Yes.
6 Q. Okay. How many hours have you worked on these
7 proceedings to date?
8 A. I honestly don't -- didn't keep a record of the
9 amount of time I was on it. It's been several hours.
10 Q. So that's in addition to the time you spent
11 preparing for today's deposition; is that correct?
12 A. This answer is a little more detailed in that I
13 review some of these patent materials and other
14 technical materials quite often, and sometimes there's
15 a mix of the time spent on that as -- included in time
16 spent on looking at one of these preparations. And so
17 to try to distinguish between the time spent on things
18 that aren't related to this and time that is, I don't
19 know that I could -- I could give you a good estimate
20 on that time.
21 Q. Okay. Understood. In what capacity -- you
22 said you were reviewing some of these patent materials.
23 In what capacity are you -- well, first let's start, so
24 what patent materials are you referring to?
25 A. Well, I have other work that I work on, just

1 for my own interest, that includes quite a lot of
2 material from my other patents and along with other
3 outside materials, so it's not like I haven't picked
4 these things up and looked at them in the last, oh,
5 several years. It's sort of an ongoing -- just the
6 field I work in.
7 Q. And so can you describe in detail the other
8 work that you worked on in the last several years
9 related to the patents at issue in this case.
10 A. Well, I don't know that the material I had
11 worked on is -- certainly the patents in this case are
12 not drawn from the material I've worked on in the past
13 several years. But there's ongoing work that relates
14 to gyro technology and other sensor technology that has
15 evolved further than beyond the years in which these
16 patents were made, and that work is ongoing. I will
17 probably work on that forever.
18 Q. Understood.
19 A. But -- yeah.
20 Q. When I refer to the institution decision or
21 institution decisions in these proceedings, do you know
22 what I'm referring to?
23 A. I do not.
24 Q. Okay. Understood. And if I refer to the
25 district court litigation, do you understand that I'm

1 referring to the litigation in district court between
2 AGNC and Nintendo?
3 A. Yes.
4 Q. And you understand that's a separate proceeding
5 than these IPR proceedings?
6 A. Yes.
7 Q. Okay. Thank you. And are you aware that in
8 those district court proceedings -- or in the district
9 litigation, are you aware that video game systems are
10 being accused?
11 A. I'm not aware of the particulars going on in
12 that case.
13 Q. So you haven't been involved with the district
14 court litigation?
15 A. I -- I certainly am not aware that I have been
16 involved in it.
17 Q. Okay. Let's turn to your declaration,
18 specifically paragraph 3, which is on -- starting on
19 page 1. So do you see in paragraph 3, toward the
20 bottom of the page, where you say, "I do not believe
21 that my substantial inventive work leading to the
22 filing of the patents was obvious to an ordinary
23 engineer in the field at the time"?
24 A. I would agree with that.
25 Q. Okay. But you see that statement, correct?

1 A. Yes.
2 Q. Okay. What is an ordinary engineer?
3 A. I have no idea what rigorous definition of an
4 ordinary engineer is. That's some term that has been
5 used, and whoever uses it I would guess may have their
6 own interpretation of what that is.
7 Q. Okay. Understood. So in your declaration, you
8 have used the term "ordinary engineer," so when you use
9 that term in your declaration, what do you mean by "an
10 ordinary engineer in the field at the time"?
11 A. I would say it would be a person who has
12 engineering background and engineering experience but
13 likely not to be worked in a very specific area and
14 likely not to be many, many years in a very specific
15 area.
16 Q. And are you aware that Dr. Lawrence Larson is
17 AGNC's expert in these proceedings?
18 A. Certainly I have heard that -- that spoken
19 about in some of the discussions with Corey.
20 MR. JOHANNINGMEIER: And so I probably should
21 have said -- I mean, the -- just remember that, you
22 know, yes or no, are you aware is fine. To the extent
23 that your awareness is based on me explaining stuff to
24 you, then don't reveal the contents of the
25 conversations we had, but...

1 BY MR. LAUPPE:
2 Q. Have you talked to Dr. Larson --
3 A. No.
4 Q. -- that you recall? No? Do you know Dr.
5 Larson?
6 A. No.
7 Q. Let's turn to paragraph 20 of your declaration,
8 Exhibit 2023. This is on page 8. Do you see at the
9 start of that sentence where you say, "My circuit
10 designs that led to the '122 and '648 Patents,
11 including the digital signal processing elements of
12 those designs, were successfully implemented in
13 American GNC's coremicro IMU product"?
14 A. Yes.
15 Q. Are those the only patents that relate to
16 American GNC's coremicro IMU product?
17 A. There are several patents. Whether or not
18 they're the only ones, I just don't remember. I
19 haven't reviewed a lot of the other patents.
20 Q. What other patents are you referring to?
21 A. Well, there's a total of 20 patents that I did
22 at AGNC, and so if you take these two out, that would
23 leave 18. I haven't reviewed all of those, and I
24 don't -- I don't remember whether this was referred to
25 in those patents or not.

1 Q. Outside of those 20 patents on which you were
2 an inventor, are you aware of any other patents
3 relating to American GNC's coremicro IMU product?
4 A. No, I can't say as I know.
5 Q. Let's turn to paragraph 9 of your declaration.
6 That's a little bit further back. This is on page --
7 starting on page 3. So do you see at the start of
8 paragraph 9 of your declaration, Exhibit 2023, where
9 you say, "By the late 1990s, silicon MEMS based
10 accelerometers were available and had been used in
11 commercial products, such as automotive airbag
12 sensors"? Do you see that?
13 A. Yes.
14 Q. Okay. Can you name any of the silicon MEMS-
15 based accelerometers that were available and had been
16 used in commercial products by the late 1990s?
17 A. Certainly there were some devices made by
18 Analog Devices that had been used in certain
19 applications that were, well, of consumer quality.
20 Q. Other than the Analog Devices products, are you
21 aware of any other silicon MEMS-based accelerometers
22 that were available and used in commercial products in
23 the late 1990s?
24 A. I'm aware there were some other available, but
25 I couldn't name the -- I couldn't name the company or

1 product brand for which they were available.
2 Q. Okay. Please turn to paragraph 11 of your
3 declaration, Exhibit 2023. This starts on page 5. So
4 at the top of paragraph 11, do you see where you
5 reference "capacitive MEMS gyroscopes available at the
6 time of the invention"? Do you see that?
7 A. Yes.
8 Q. Can you name any of the capacitive MEMS
9 gyroscopes that you reference in paragraph 11?
10 A. Yes. There were two areas of work that were
11 being use -- that were going on. One of them was at
12 JPL. They were working on some MEMS gyros. And
13 also -- then, of course -- well, there's JPL and there
14 was MIT. Was MIT -- Draper Labs. Draper Labs was also
15 working on one.
16 Q. Did you work at Draper Labs?
17 A. No.
18 Q. Okay. And did you work at JPL?
19 A. No.
20 Q. Okay. So you would admit that you didn't
21 invent MEMS accelerometers, correct?
22 A. That's correct.
23 Q. And you would admit that you didn't invent MEMS
24 gyroscopes, correct?
25 A. I certainly had innovations in MEMS gyroscopes

1 that are even there today.
2 Q. But there were MEMS gyroscopes available prior
3 to either of -- either the '122 or '648 patents; is
4 that correct?
5 A. There were some, let's say, lower performing
6 types of gyros that were being worked by several
7 companies, but as to what I'm aware of, none of these
8 ever met the more stringent requirements needed by the
9 marketplace.
10 Q. And those were MEMS gyroscopes?
11 A. Yes.
12 MR. LAUPPE: I'm going to introduce another
13 exhibit. I think this is going to be -- what number do
14 we have? Exhibit 1035.
15 (Exhibit 1035 was marked for identification.)
16 BY MR. LAUPPE:
17 Q. And Exhibit 1035 is a excerpt from the
18 declaration of Dr. Lawrence E. Larson in these
19 proceedings, Exhibit 2019, paragraph 57.
20 So Mr. McCall, do you see where Dr. Larson
21 has -- what we have provided as his definition of a
22 person of ordinary skill in the art in this exhibit?
23 A. I see that.
24 Q. Okay. And do you see where it says, "a person
25 of ordinary skill in the art would have at least a

1 Master's Degree in Electrical or Electronics
2 Engineering, and approximately five years of relevant
3 experience in the development of control systems for
4 inertial navigation, MEMS semiconductor processing, and
5 analog circuit design--with additional education
6 substituting for experience and vice versa"? Do you
7 see that?
8 A. Yes.
9 Q. How did you meet Dr. Larson's person of
10 ordinary skill standard in 1999?
11 A. I certainly had more than five years'
12 experience working in the field, many more than five,
13 more than five years working in the development of
14 control systems. Work in the semiconductor processing
15 area. More years than that in analog circuit design.
16 Q. And just to point you to the educational
17 requirement, did you have a master's degree in
18 electrical or electronics engineering in 1999?
19 A. Yes.
20 Q. Okay. And so you said you had at least the
21 five years of experience in the field in Dr. Larson's
22 person of ordinary skill in the art definition. What
23 experience -- in what -- sorry.
24 In what roles did you gain that experience?
25 A. Well, it was an engineering role. It was

1 working on navigation equipment, navigation equipment
2 that contained gyroscopes and accelerometers. Also
3 some work in the use of those instruments in flight
4 control, some use of those instruments in the support
5 of other systems. Mostly the work was done, though, in
6 the inertial navigation area.
7 Q. And when you refer to this prior work you did
8 in the field, was this for a particular company?
9 A. Yes.
10 Q. What company was that?
11 A. At the time it was known as Litton Guidance and
12 Control Systems.
13 Q. Litton Guidance, you said? Okay. When did you
14 start working at Litton Guidance and Control Systems?
15 A. 1978.
16 MR. LAUPPE: I'm going to introduce an exhibit.
17 This is going to be Exhibit 1036.
18 (Exhibit 1036 was marked for identification.)
19 BY MR. LAUPPE:
20 Q. And Exhibit 1036 is an article by Gary K.
21 Fedder and Roger T. Howe titled "Multimode Digital
22 Control of a Suspended Polysilicon Microstructure,"
23 published in 1996. Mr. --
24 MR. JOHANNINGMEIER: Just for the record, I'm
25 just going to object to the exhibit, but go on.

1 MR. LAUPPE: Okay. Understood.
2 BY MR. LAUPPE:
3 Q. Mr. McCall, have you seen this article before?
4 A. No, I don't recall seeing it.
5 Q. So you weren't aware of this article in 1999,
6 correct?
7 A. That's correct.
8 MR. LAUPPE: Okay. I'm going to introduce
9 another exhibit. This is going to be Exhibit 1037.
10 (Exhibit 1037 was marked for identification.)
11 BY MR. LAUPPE:
12 Q. And this is -- turn the page to 3 or so. This
13 is a dissertation by Thor Nelson Juneau titled
14 "Micromachined Dual Input Axis Rate Gyroscope," from
15 1998.
16 Mr. McCall, have you seen this dissertation
17 before?
18 A. No, I haven't.
19 MR. JOHANNINGMEIER: Just for the record -- I
20 didn't get it in before you asked the question, but we
21 object to this exhibit as well.
22 BY MR. LAUPPE:
23 Q. So you weren't aware of this article -- this
24 dissertation in 1999, correct?
25 A. That's correct.

1 MR. LAUPPE: Okay. And then I'm going to
2 introduce an exhibit, Exhibit Number 1038.
3 (Exhibit 1038 was marked for identification.)
4 BY MR. LAUPPE:
5 Q. Which is an article titled "Utilization of
6 GPS/MEMS-IMU for Measurement of Dynamics for Range
7 Testing of Missiles and Rockets," by Roy R. Minor and
8 David W. Rowe, published in 1998.
9 MR. JOHANNINGMEIER: We also object to this
10 exhibit.
11 BY MR. LAUPPE:
12 Q. Mr. McCall, have you seen this article before?
13 A. No, I haven't.
14 Q. Okay. So you weren't aware of this article in
15 1999, correct?
16 A. That's correct.
17 Q. Okay. So now let's go back to your
18 declaration, Exhibit 2023. And please turn to
19 paragraph 3, which is on -- starting on page 1.
20 And, Mr. McCall, please let me know if you need
21 a break at any time, but like I say, I'm hoping to get
22 you out of here pretty soon.
23 So, actually, if you could turn to page 2, sort
24 of the bottom half of paragraph 3, do you see where you
25 say at the bottom of paragraph 3, "But I understand

1 that I am not being asked for my personal or expert
2 opinion on this matter. Instead, I confine my
3 testimony to the factual context of the inventive
4 work"? Do you see that?
5 A. Yes.
6 Q. And do you stand by that statement?
7 A. Yes.
8 Q. So I'd just like to confirm, you are not
9 offering any opinions in this declaration,
10 Exhibit 2023; is that correct?
11 A. No.
12 Q. Okay. And you were not asked to give an
13 opinion about the validity of the claims; is that
14 correct?
15 A. That's correct.
16 Q. Okay. And you were not offering opinions about
17 the validity of the claims at issue in this
18 declaration, correct?
19 A. That's correct.
20 Q. Okay. And you have no position on the validity
21 of the claims; is that correct?
22 MR. JOHANNINGMEIER: Objection.
23 THE WITNESS: I have some personal feelings
24 about it, but as for any legal opinions, I haven't been
25 asked for any and haven't offered any.

1 BY MR. LAUPPE:
2 Q. Are you an attorney?
3 A. No.
4 Q. Okay. Do you consider yourself a technical
5 expert?
6 MR. JOHANNINGMEIER: Objection. Vague.
7 THE WITNESS: I do have some technical
8 expertise. Of opinion for me to judge whether I'm a
9 technical expert or not, I don't make those kind of
10 judgments.
11 BY MR. LAUPPE:
12 Q. Have you worked for NASA?
13 A. No, I have not.
14 Q. Okay. Did you invent angular rate sensors?
15 MR. JOHANNINGMEIER: Objection. Calls for a
16 legal conclusion.
17 Please answer. Sorry.
18 THE WITNESS: I can answer?
19 MR. JOHANNINGMEIER: Yeah.
20 THE WITNESS: Certainly the material that I
21 contributed to these specific types of gyros is indeed
22 a type of an angular rate sensor.
23 BY MR. LAUPPE:
24 Q. But angular rate sensors existed before,
25 correct?

1 A. That's a good question, and that is correct.
2 Q. Okay. Did capacitors exist prior to the
3 patents at issue in these proceedings?
4 A. Yes.
5 Q. Did analog signals exist prior to the patents
6 at issue in these proceedings?
7 A. Yes.
8 Q. Did you invent digital signals?
9 A. Certain specific types of digital signals are
10 unique to work I have done.
11 Q. But digital signals existed prior to any work
12 you did, correct?
13 A. If you consider that in a broad sense, yes.
14 Q. Okay. Did capacitive sensing exist prior to
15 the patents at issue in this -- in these proceedings?
16 A. Yes, they did.
17 Q. Did analog-to-digital converters exist prior to
18 the patents at issue in these proceedings?
19 A. The type of analog-to-digital conversion done
20 in circuitry of the gyroscopes that I have as my
21 inventions, I don't know whether that existed before or
22 not. Other types of A-to-D converters did exist.
23 Q. And did digital-to-analog converters exist
24 prior to these patents?
25 A. Yes.

1 Q. Did low-pass filters exist prior to these
2 patents?
3 A. Yes.
4 MR. JOHANNINGMEIER: I'm just going to object
5 to scope, but you can answer.
6 BY MR. LAUPPE:
7 Q. Did inertial sensors exist prior to the patents
8 at issue in these proceedings?
9 A. Non-MEMS versions definitely existed.
10 Q. And MEMS versions existed as well, correct?
11 A. Lower quality ones existed.
12 Q. Did digital signal processing exist prior to
13 the patents at issue in these proceedings?
14 A. Specific digital signal processing used in
15 these patents did not exist, but digital signal
16 processing as a broad term did exist.
17 Q. Did feedback loops exist prior to the patents
18 at issue in these proceedings?
19 A. The specific feedback loops used in these
20 patents, to my knowledge, did not exist, but digital
21 feedback loops or feedback loops in general did exist.
22 Q. How about force feedback loops?
23 A. I'm not sure I understand what you're referring
24 to there. There's many different types of feedback
25 loops that -- that use sensors to measure forces and

1 then feed back the signal, so I might need a more
2 specific description or exhibit of what you're talking
3 about there to be able to answer that question
4 accurately.
5 Q. Understood. But you just referred to different
6 types of feedback loops that use sensors to measure
7 forces and then feed back the signal, correct?
8 A. Correct.
9 Q. Did any of those types of feedback loops exist
10 prior to the patents at issue in these proceedings?
11 A. There were types of feedback loops that are not
12 specific to this patent that existed.
13 Q. Did transimpedance amplifiers exist prior to
14 the patents at issue in these proceedings?
15 MR. JOHANNINGMEIER: Objection. Scope.
16 THE WITNESS: In a broad sense transimpedance
17 amplifiers did exist, the specific realizations of them
18 that are specific to this patent.
19 BY MR. LAUPPE:
20 Q. How about summers? Did those exist -- sorry.
21 Did those exist prior to the patents at issue in these
22 proceedings?
23 MR. JOHANNINGMEIER: Same objection.
24 THE WITNESS: Should I go ahead and answer?
25 MR. JOHANNINGMEIER: Yeah, I mean, you can

1 answer these. I'm just objecting for the record.
2 THE WITNESS: The specific realization of the
3 type of summer and the signals that were being summed
4 in these patents is indeed new work, but summers
5 definitely existed in the broad sense.
6 BY MR. LAUPPE:
7 Q. And did high-pass filters exist in the prior
8 art?
9 A. There again, not the specific realization used
10 in these patents, but in a broad sense, yes.
11 Q. Did demodulators exist in the prior art?
12 A. The specific --
13 MR. JOHANNINGMEIER: Objection. Scope. Sorry.
14 THE WITNESS: The specific ones used in this
15 patent are -- well, they're very specific realization,
16 but in the general terms, yes.
17 BY MR. LAUPPE:
18 Q. And did voltage amplifiers exist prior to the
19 patents at issue in these proceedings?
20 MR. JOHANNINGMEIER: Objection.
21 THE WITNESS: This is a very broad term. Yes,
22 they did.
23 BY MR. LAUPPE:
24 Q. Did integrators exist in the prior art?
25 MR. JOHANNINGMEIER: Objection.

1 THE WITNESS: The type of integrations that's
2 done in this art is very specific to these patents.
3 Integrators in general did exist before.
4 BY MR. LAUPPE:
5 Q. Did drive amplifiers exist prior to these
6 patents?
7 MR. JOHANNINGMEIER: Objection.
8 THE WITNESS: The specific realizations in
9 these patents is unique to these patents. A broader
10 sense of drive amplifiers did exist.
11 BY MR. LAUPPE:
12 Q. How about oscillators?
13 MR. JOHANNINGMEIER: Objection.
14 BY MR. LAUPPE:
15 Q. And, sorry, let me make that question more
16 clear. Did oscillators exist in the prior art to these
17 patents?
18 MR. JOHANNINGMEIER: Same objection.
19 THE WITNESS: I don't know. I'm not familiar
20 with all the prior art.
21 BY MR. LAUPPE:
22 Q. Did discrete Fourier transform, or FFT -- did
23 that exist in the prior art?
24 MR. JOHANNINGMEIER: Objection.
25 THE WITNESS: There again, that's a broad term.

1 For various kinds of products FFTs have existed.
2 BY MR. LAUPPE:
3 Q. And they existed in the prior art; is that
4 correct?
5 A. Well, I don't know --
6 MR. JOHANNINGMEIER: Objection.
7 THE WITNESS: -- about the prior art.
8 BY MR. LAUPPE:
9 Q. Did you invent the discrete Fourier transform,
10 or FFT?
11 MR. JOHANNINGMEIER: Objection.
12 THE WITNESS: The specific type of Fourier
13 material that is used in these patents is unique to
14 these patents. That that is used for other types of
15 processing, no, I didn't invent that.
16 BY MR. LAUPPE:
17 Q. Did you invent phase lock loops?
18 MR. JOHANNINGMEIER: Objection.
19 THE WITNESS: The realization in these patents
20 is unique to these patents. The phase lock loops are
21 another broad term that have been used in lots of
22 products. Those did exist before these patents.
23 BY MR. LAUPPE:
24 Q. Did you invent the inertial measurement unit,
25 or IMU?

1 MR. JOHANNINGMEIER: Objection.
2 THE WITNESS: The term is used as a broad term
3 for various configurations of inertial sensors. The
4 invention of the term itself was used before these
5 patents.
6 BY MR. LAUPPE:
7 Q. Do you know what 6-degree-of-freedom tracking
8 is? Is that clear to you what that is?
9 A. I know what it is.
10 Q. Did that exist in the prior art to the patents
11 at issue in these proceedings, 6-degree-of-freedom
12 tracking?
13 MR. JOHANNINGMEIER: Objection.
14 THE WITNESS: I don't know if it's in the prior
15 art or not. I don't -- I haven't reviewed all the
16 prior art.
17 BY MR. LAUPPE:
18 Q. But it existed prior to the patents at issue in
19 these proceedings, correct, the 6-degree-of-freedom
20 tracking?
21 A. Well, depending on your definition of the
22 terms. I don't know. Don't -- I don't know. I don't
23 know how to answer that one.
24 Q. You said you understood what 6-degree-of-
25 freedom tracking is, correct?

1 A. Yes.
2 Q. So what is your understanding of 6-degree-of-
3 freedom tracking?
4 MR. JOHANNINGMEIER: Objection. Scope.
5 THE WITNESS: Well, there's six types of motion
6 that an object can be exhibiting or encountering, and
7 any system that would track that motion, you could -- I
8 guess you could call that a tracker.
9 BY MR. LAUPPE:
10 Q. So systems that tracked motion in all six
11 degrees of freedom, did those exist before the patents
12 at issue in these proceedings?
13 MR. JOHANNINGMEIER: Objection.
14 THE WITNESS: The type of tracking that this
15 type of -- that's in these patents is unique to these
16 patents. There were other types that existed before
17 these patents, but --
18 BY MR. LAUPPE:
19 Q. And -- oh, I'm sorry. Any other --
20 A. But they may or may not have had anything to do
21 with -- with any inertial equipment.
22 Q. Did you invent voltage signals?
23 MR. JOHANNINGMEIER: Objection.
24 THE WITNESS: Voltage signals have been around
25 a long time. These patents contain some very unique

1 voltage signals, but others have been around before
2 these patents.
3 MR. LAUPPE: Okay. I'm going to introduce
4 another exhibit, and then I think we should be pretty
5 close to done. So this is going to be Exhibit 1039.
6 (Exhibit 1039 was marked for identification.)
7 BY MR. LAUPPE:
8 Q. And, I'm sorry, this is very small, so we can
9 blow it up on the screen if necessary. This is a
10 website -- this is a printout of a website,
11 www.AmericanGNC.com/about. And I would just like to
12 direct you to the third page, if you turn there. And,
13 actually, I'm sorry, it's the -- yes, the third page.
14 And I apologize for the size. It was really hard to
15 print this out, but do let me know if it would be
16 helpful to have this blown up on the screen.
17 A. Okay.
18 Q. Okay. Have you seen the website shown on
19 Exhibit 1039 before, Mr. McCall?
20 A. I don't -- I don't -- I can't say that I have.
21 Q. And then on page 3, which I think you were just
22 reviewing -- sorry to make you look at this text
23 again -- do you see where it says, "Hiram McCall" --
24 this is at the very top of that paragraph -- "Hiram
25 McCall is currently the Director of Products at

1 American GNC Corporation...." Do you see that?
2 A. Yes.
3 Q. Okay. Is that true?
4 A. Well, I mean, I'm retired at this point, but...
5 Q. So are you not the Director of Products at
6 American GNC Corporation?
7 A. Currently?
8 Q. Well, what this says is, "Hiram McCall is
9 currently the Director of Products at American GNC
10 Corporation...." Do you see that?
11 A. Yes.
12 Q. So it sounds like that might not be true. Is
13 that correct?
14 MR. JOHANNINGMEIER: Objection.
15 MR. LAUPPE: And I'll rephrase the question.
16 BY MR. LAUPPE:
17 Q. So are you not currently the Director of
18 Products at American GNC Corporation, Mr. McCall?
19 A. I'm retired.
20 Q. So does that mean you're not currently the
21 Director of Products at American GNC Corporation?
22 MR. JOHANNINGMEIER: Objection. Asked and
23 answered.
24 THE WITNESS: Well, I definitely do some
25 advisory tasks from time to time in assistance to the

1 work that's going on there.
2 BY MR. LAUPPE:
3 Q. But you're not aware that you're currently the
4 Director of Products at American GNC Corporation; is
5 that correct?
6 A. This is the first time I've seen this.
7 Q. Are you being compensated by American GNC as
8 its Director of Products?
9 A. No.
10 Q. Do you know what your duties are as AGNC's
11 Director of Products?
12 MR. JOHANNINGMEIER: Objection.
13 THE WITNESS: As I said, I have definitely been
14 offering some -- you can call it consulting-type
15 services without compensation and advisory services.
16 And similarly for things like these proceedings, I'm
17 not compensated for any of that, which is clearly
18 efforts being contributed to American GNC.
19 BY MR. LAUPPE:
20 Q. So to your knowledge, you are not currently the
21 Director of Products at American GNC Corporation; is
22 that correct?
23 MR. JOHANNINGMEIER: Objection. Asked and
24 answered.
25 THE WITNESS: Depends on your definition,

1 doesn't it?
2 BY MR. LAUPPE:
3 Q. Is your work in the present proceedings part of
4 your work as American GNC's Director of Products?
5 MR. JOHANNINGMEIER: Objection.
6 THE WITNESS: There again, as I say, I
7 contribute to the efforts that are going on there
8 fairly often but in a non-compensated form. I'm not an
9 expert in the wording and the wordsmithing of these
10 types of questions that you're answering [sic], so I
11 don't really know how to answer them.
12 BY MR. LAUPPE:
13 Q. And I just want to direct you to another part
14 of this paragraph. So toward the bottom, about five
15 lines up, do you see where it says, "From 2015 to the
16 present" -- do you see that?
17 A. Yes.
18 Q. Okay. "From 2015 to the present Hiram has
19 supported the successful licensing of AGNC patents
20 (including but not limited to those patents with him as
21 the inventor) in the areas of silicon MEMS inertial
22 rate sensors and critical interfacing circuits." Do
23 you see that?
24 A. Yes.
25 Q. Is --

1 A. This is an accurate statement.
2 Q. And how have you supported licensing of AGNC
3 patents from 2015 to the present?
4 MR. JOHANNINGMEIER: So just to caution you
5 because, you know, that answer could theoretically get
6 into work that you've been doing with lawyers, and so I
7 don't want you to detail communications you've had with
8 lawyers. I think high-level general descriptions are
9 probably fine, but just be careful not to reveal any --
10 substance of any communications you've had with lawyers
11 about what you should be doing or why.
12 THE WITNESS: Okay. Since my patents were
13 submitted years ago, there has been continued work
14 going on at AGNC, and I certainly have been asked and
15 have assisted in the effort to bring that work to some
16 fruition.
17 BY MR. LAUPPE:
18 Q. What are you currently doing at AGNC to support
19 the licensing of AGNC patents?
20 MR. JOHANNINGMEIER: I think that's probably a
21 little bit over the line, so to the extent that's
22 calling for anything that you have been directed to do
23 by counsel, don't answer. I think very high-level
24 broad statements about the kind of work you're doing
25 are probably fine, but there is a very narrow line

1 there, so just don't reveal any -- don't say anything
2 that would reveal information that you have been
3 instructed from counsel.
4 THE WITNESS: Well, as Corey says, there's been
5 some items of work that are specific to the legal side
6 of it.
7 BY MR. LAUPPE:
8 Q. Is your work in the present proceedings part of
9 your work supporting the licensing of AGNC patents?
10 A. Well, the discussions I've been having with
11 Corey, I can't recall anything that was brought up
12 about current licensing in any of these recent
13 discussions.
14 MR. LAUPPE: Okay. We've been going about an
15 hour. How about we take a quick break, and then I
16 think we should be pretty close.
17 THE WITNESS: Okay.
18 (Break taken from 2:00 p.m. to 2:11 p.m.)
19 MR. LAUPPE: So no further questions from
20 petitioners in these proceedings.
21 MR. JOHANNINGMEIER: Okay. So we have no
22 questions at this point.
23 MR. LAUPPE: Great. Then we will let you go.
24 THE REPORTER: Mr. Johanningmeier, do you want
25 to order a copy of the transcript or a rough of the

1 transcript?
2 MR. JOHANNINGMEIER: I mean, I want a copy of
3 the transcript. Just on a regular delivery, that's
4 fine. I don't need a rough.
5 (Ending time: 2:11 p.m.)
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1 STATE OF CALIFORNIA)
) SS.
2 COUNTY OF LOS ANGELES)
3
4
5 I, HIRAM McCALL, hereby certify under penalty
6 of perjury under the laws of the State of California
7 that the foregoing is true and correct.
8 Executed this _____ day of _____
9 202__, at _____, California.
10
11
12
13
14 _____
15 HIRAM McCALL
16
17
18
19
20
21
22
23
24
25

1 STATE OF CALIFORNIA)
2)
COUNTY OF LOS ANGELES)
3
4 I, AILEEN NEITZERT, do hereby certify:
5
6 That I am a duly qualified Certified Shorthand
7 Reporter, in and for the State of California, holder of
8 certificate number 5318, which is in full force and
9 effect, and that I am authorized to administer oaths
10 and affirmations;
11 That the foregoing deposition testimony of the
12 herein named witness was taken before me at the time
13 and place herein set forth;
14 That prior to being examined, the witness named
15 in the foregoing deposition, was duly sworn or affirmed
16 by me, to testify the truth, the whole truth, and
17 nothing but the truth;
18 That the testimony of the witness and all
19 objections made at the time of the examination were
20 recorded stenographically by me and were thereafter
21 transcribed under my direction and supervision;
22 That the foregoing pages contain a full, true,
23 and accurate record of the proceedings and testimony to
24 the best of my skill and ability;
25 I further certify that I am not a relative

1 or employee or attorney or counsel of any of the
2 parties, nor am I financially interested in the outcome
3 of this action.
4
5 IN WITNESS WHEREOF, I have subscribed my name
6 this 17th day of March, 2025.
7
8
9 Aileen Neitzert
10 AILEEN NEITZERT, CSR NO. 5318
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