

Hall Declaration Exhibit E

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ROBERT JACOBSEN,

Plaintiff,

v.

No. C-06-1905-JSW

MATTHEW KATZER, et al.,

Defendants.

DEPOSITION OF
HOWARD G. PENNY

FRIDAY, SEPTEMBER 11, 2009
12:03 P.M.

OFFICES OF GARRETT REPORTING SERVICES
8305 SIX FORKS ROAD
RALEIGH, NORTH CAROLINA

COPY



Post Office Box 98475, Raleigh, North Carolina 27624-8475
Telephone (919) 676-1502 - Fax (919) 676-2277

1 developed simultaneously.

2 Q Okay. Of the decoder definitions, which
3 ones did you work on?

4 A It -- they got split up into basic groups
5 that were similar, one of them being the steam,
6 QSI_steam.xml. There was QSI_diesel.xml. There's
7 QSI_electric. And quite honestly, I don't have it in
8 front of me, so I don't remember. There was about four or
9 five different ones. Articulated, I believe, is one.

10 Q Okay. If you think of the others as we're
11 talking, just let me know, and you can add to your
12 testimony.

13 A All right.

14 Q Of those -- those were the QSI. Have you
15 contributed any other files, aside from decoder
16 definitions based on QSI decoders?

17 A Sure.

18 Q And what other decoder definition files have
19 you --

20 A I believe that I actually submitted one or
21 two for a new Digitrax decoder.

22 Q Do you remember any --

23 A I don't remember specifically which ones
24 they were.

25 Q And any other decoder definition files?

1 A No.

2 Q Okay. But your decoder definition file
3 needs to be able to interface with the DecoderPro?

4 A Correct. I mean, I created the format that
5 JMRI uses to read it.

6 Q Oh. Got it. Okay.

7 A And therefore, the DTD and the actual
8 decoder files need -- had to be designed so that they
9 would feed the information into JMRI for what the format
10 that I had decided within the program itself to
11 understand.

12 Q Okay. And what considerations -- well,
13 actually, we'll step back a moment, because I'll talk with
14 you a little bit more about the QSI file in a few minutes.

15 Now, you said that you had done some other
16 decoder definition files, in particular Digitrax.

17 Oh, actually, let me ask you: You said that
18 you had done a QSI diesel and perhaps a QSI articulated
19 steam. Do you know how many hours it took for you to
20 create those?

21 A The diesel did not take as long as the
22 steam, but it took more than the electric.

23 Q Okay. Can you give me an estimate?

24 A I would say total time on the -- the diesel
25 may have been 25 to 30 hours.

1 come from a manufacturer. And what CVs they're in, where
2 they're -- if you want me to get more specific about QSI,
3 it becomes quite complex because the -- it also represents
4 their index into a matrix of how to manipulate many of the
5 functions, most of them being sound-based.

6 Q Okay. We'll get to that in a moment, but
7 what is -- what would you say the purpose of a decoder
8 definition file is?

9 A Basically, to provide default information
10 and an understanding for the program to know what CVs are
11 available for a particular decoder and what the -- the
12 program's got to read the data from somewhere, either from
13 a definition file or from a binary database. It's got to
14 have the information to do it.

15 Q Okay. And that's what the decoder
16 definition file does? It gets read by a computer program?

17 A Correct.

18 Q Okay. And it displays that information in
19 the computer program?

20 A Yes, in the user interface.

21 Q Correct. Okay.

22 What is the purpose of a -- or do you know
23 what a -- do you know what a QSI manual is?

24 A Yes.

25 Q Let's see. A QSI *NMRA DCC Reference Manual*

1 for QSI Quantum HO Equipped Locomotives. You know what
2 that is?

3 A Yes, I do.

4 Q What is the purpose of that manual?

5 A The purpose of the manual is to explain how
6 to utilize the functionality of the decoder. It gives an
7 explanation of how the matrix -- well, let me back up just
8 a little bit.

9 The NMRA set forth "X" number of
10 configuration variables to be developed, and it was to be
11 a industry standard. They're -- in their short-sighted
12 way, just like IBM was when nobody thought that a computer
13 would ever need more than 64K of memory -- it's far too
14 limited with the capability of today's electronics. And
15 the QSI manual shows their methodology of adding another
16 64,000 variables in the space of 14 CVs.

17 Q Is the -- are the CVs -- do the CVs appear
18 in the -- actually, let me ask you this: Let's take that
19 decoder definition file and the QSI manual. Are the two
20 interchangeable?

21 A No.

22 Q If you took a page from a QSI manual and
23 scanned it, digitized it, could you put it in a decoder
24 definition file and have the decoder definition file work?

25 A No. There's no comparison.

1 Q And why is that?

2 A The --

3 Q And for the record, you're reaching for your
4 copy of --

5 A I actually have my original copy of the
6 Quantum NMRA DCC Reference Manual for QSI Quantum HO
7 Locomotives. The -- the manual is a document pretty much
8 designed for programmers -- or written by programmers. A
9 general layman is probably not going to understand it.
10 But it gives an explanation of how the programming of the
11 decoder works and the intricacies of it. And there are a
12 few examples in there of how you would do this, how you
13 would program a particular configuration variable. But
14 no, there's -- there's virtually nothing in it that could
15 be scanned or cut-and-paste and it become a decoder file.

16 Q Okay. Now, about -- you're familiar with
17 QSI decoders?

18 A Yes.

19 Q Do they have sound recordings on them?

20 A Yes.

21 Q Are these sound recordings based on
22 recordings from actual trains?

23 A To my knowledge, they are.

24 Q Let's see. Now I'm going to step over to --

25 MR. JERGER: Can you speak up, Victoria?

1 to steam engines."

2 And my response: "This is good to know. It
3 may help to reduce the importance of a new, quote,
4 exclude, unquote, attribute for the particular model. I
5 have now broken the QSI Quantum decoders into separate
6 families, such as steam and diesel, etc. This way each
7 family is in a separate file and can include just those
8 CVs that family supports. This, in turn, makes it
9 possible to customize the programmer interface for a
10 particular group.

11 "I've already had to include an 'infoOnly'
12 attribute for certain CVs that cannot be changed, such as
13 CV 53.1.0. My experience shows that not only can it not
14 be changed, but it can't be read as well, causing a
15 timeout from the programmer. This attribute allows the
16 programmer to skip CVs that cannot be read during a 'read
17 all CVs' operation."

18 And then I respond to the -- him looking for
19 the supported CVs or non-supported, "This may take a
20 little, but I'll start on Saturday."

21 "Wow, that would be fantastic. I really
22 appreciate your help."

23 Q I want to ask you about one statement. You
24 said your -- you said that you had broken the QSI Quantum
25 decoders into separate families, such as steam, diesel, et

1 cetera?

2 A Yes.

3 Q Now, what did you mean by that?

4 A Basically, they are broken into separate --
5 the -- the families are the decoder files. There's a
6 steam file, and it lists all the decoders, at -- at this
7 time, that were for steam engines.

8 Q Okay. So are there multiple -- are there
9 multiple QSI steam decoders?

10 A Oh, yes. There's quite a few.

11 Q And are they included in the decoder
12 definition QSI steam file?

13 A I thought there was -- yes. All of the --

14 Q Which exhibit are you looking at right now?

15 A I am -- I'm looking back at Exhibit
16 Number 7. I mean, he had sent me a list. Under "Steam"
17 there's the Hudson, the Mikado, M1A Mountain, the
18 ON30-C/16 standard, one with Christmas. There's a
19 Pennsylvania Railroad-J1, a Union Pacific Mountain, a K4.
20 There's quite a few. Let's see -- one, two, three --
21 well, it's right easy to tell. There's 14 of them.

22 Q Okay. And are those included in one family?

23 A Yeah, yeah.

24 Q Was that a product of a decision that you
25 made?

1 A Yes, to keep them together -- yes.

2 Q All right. Did you get a response from
3 Mr. Pruss to the e-mail, Penny Deposition Exhibit 10?

4 A I'm sure I did.

5 MS. HALL: Okay. I'm asking the court
6 reporter to hand Penny Deposition Exhibit Number 11.
7 This is Bates-stamped RGJ_HP.00000014 through
8 .00000019. And Mr. Penny is looking at this exhibit.

9 BY MS. HALL:

10 Q Mr. Penny, let me know when you have
11 finished reviewing this exhibit.

12 A Oh. Yes, I have.

13 Q Mr. Penny, do you recognize this e-mail?

14 A Yes, I do.

15 Q Why do you do -- why do you recognize it?

16 A It is a response to -- how far back? --
17 Exhibit 9, basically. It says, "Do you have a list of
18 products and range of versions?" And back in Exhibit 9,
19 he said, "I will send you such a list on Saturday or
20 Sunday." And this is a response to that e-mail, saying
21 "See the attached file." And gives a little bit further
22 information about new Version 6.

23 Q Okay. And what else does it say in
24 Mr. Pruss's e-mail?

25 A Okay. He is responding to -- had to -- the

1 .00000019. And after you received this information, what
2 did you do with it?

3 A I took the information out that was
4 relevant, which the model numbers was important. I began
5 to go back and just update and add particular models to
6 the various decoder definition files, so that the specific
7 information for each of these would be available to the
8 decoders.

9 Q Okay. Did you respond to Mr. Pruss's
10 e-mail?

11 A I'm sure I probably did.

12 MS. HALL: Okay. I would like to ask the
13 court reporter to hand Penny Deposition Exhibit 12 to
14 Mr. Penny. This is marked RGJ_HP.00000020, one page.
15 And Mr. Pruss has -- or Mr. Penny has that exhibit in
16 hand.

17 THE WITNESS: Yes, I remember this.

18 BY MS. HALL:

19 Q Why do you -- why did you remember it?

20 A It's my response to -- thanking him for --
21 for sending me the data and also responding to his
22 referring me to the Version 3 DCC reference manual.

23 Q Okay. And what -- when did you send this
24 e-mail?

25 A April 19th, 2005, at 1:15 in the afternoon.

1 Q And did this e-mail reflect what was on your
2 mind at the time you wrote it?

3 A Yes.

4 Q Do you know if Mr. Pruss responded to you?

5 A I would imagine so, because of my comment.

6 MS. HALL: I'd like to ask the court
7 reporter to hand over Penny Deposit Exhibit 13.
8 That's Bates-stamped RGJ_HP.00000024.

9 Scott, for your own reference, I'm skipping
10 over three pages, so you can set those other pages
11 aside. And Mr. -- and it's -- it is two pages long.
12 It's -- this exhibit goes to .00000025. Mr. Penny is
13 reviewing this exhibit.

14 BY MS. HALL:

15 Q Mr. Penny, let me know when you're finished.

16 A Yes, I remember it.

17 Q And why do you remember this?

18 A Well, it was my response -- his response to
19 me telling him that my version of the 3.0 manual and the
20 one -- the link that he sent me to are the same. And he
21 responds, "Oops. The documentation is incorrect. The
22 part about the Outputs 1 through 4 being preassigned and
23 cannot be changed is no longer correct.

24 "This incorrect statement slipped through my
25 own several iterations of proofreading this manual."

1 MS. HALL: I'm going to hand -- ask the
2 court reporter to hand Penny Deposition Exhibit
3 Number 15. That is RGJ_HP.00000028 through
4 RGJ_HP.00000029.

5 For your reference, Scott, there's a page
6 that I'm skipping. That's Number 27. I'm not going
7 to refer to that.

8 BY MS. HALL:

9 Q And, Mr. Penny, you're reviewing this e-mail
10 right now. Let me know when you're finished reviewing it.

11 A (Witness nods head.)

12 Q Mr. Penny, do you recognize --

13 MS. HALL: -- or, for the record, Mr. Penny
14 shook his head -- or nodded his head.

15 THE WITNESS: Yes, I recognize this.

16 BY MS. HALL:

17 Q Mr. Penny, do you recognize this?

18 A Yes.

19 Q And why do you recognize it?

20 A It -- it is a follow-up from the last
21 message, Number 14 Exhibit.

22 Q Penny Deposition Exhibit Number 14?

23 A Correct. His -- he has copied part of it in
24 there: "I had mentioned there were several typos in the
25 manual as well. I had sent them -- sent him a list, and

1 he never got back." Blah blah blah.

2 "Yes, please send me the list. I can then
3 remind Fred about the changes needed."

4 Q And who is "Fred" in this e-mail?

5 A I assume that he's referring to Frederick
6 Severson.

7 Q And did you -- when was this sent to you?

8 A This was sent May 7th, 2005, at 3:54.

9 Q Did you receive a response to this e-mail?

10 A An additional response?

11 Q Yes.

12 A I would assume so. I mean -- did I respond
13 to him after this or --

14 Q Yes.

15 A Yes.

16 MS. HALL: Okay. I'm asking the court
17 reporter to hand Penny Deposition Exhibit Number 16 to
18 Mr. Penny. Mr. -- this is Bates-stamped
19 RGJ_HP.00000028 through RGJ_HP.00000029. And
20 Mr. Penny has the exhibit in his hand, Penny
21 Deposition Exhibit Number 15. He's also looking at
22 Penny Deposition Exhibit Number 14. And he is
23 reviewing Penny Deposition Exhibit Number 15.

24 BY MS. HALL:

25 Q Let me know, Mr. Penny, when you're finished

1 supply me the data that I wanted to do it and do it
2 correctly and the most -- with the most coverage, I
3 felt that they were encouraging me to do this.

4 BY MS. HALL:

5 Q Let me ask you this: If you -- if QSI had
6 e-mailed you or contacted you and objected to your --

7 (Loud beeping from phone.)

8 MS. HALL: Scott, are you there?

9 MR. JERGER: Yes.

10 MS. HALL: Okay.

11 BY MS. HALL:

12 Q If QSI had objected to your use of QSI data
13 and QSI decoder definition files, would you have stopped?

14 A Oh, absolutely yes.

15 Q I noticed in one of your earlier e-mails
16 that it was a post to a Yahoo! Groups Listserv. Is my
17 memory correct about that? It may have been Exhibit
18 Number 5 or something.

19 A Number 6.

20 Q Okay. Exhibit Number 6. Yes. It might --
21 refresh my memory. Is that a -- that's a post to a Yahoo!
22 Groups Listserv?

23 A Yes, it was on Yahoo! Group.

24 Q Can anyone in the public access this
25 Listserv?

1 A I have no idea.

2 MS. HALL: Okay. I'm going to hand to
3 Mr. -- I'm going to have Penny Deposition Exhibit
4 Number 38 -- I'm going to hand it to Mr. Penny. This
5 is Jacobsen Declaration Exhibit AD. I'm handing this
6 exhibit to the witness right now.

7 Scott, do you have that exhibit?

8 MR. JERGER: Yes.

9 BY MS. HALL:

10 Q Okay. Mr. Penny, please review that
11 exhibit, and when you're done, let me know.

12 A Okay.

13 Q Mr. Penny, do you know what that exhibit is?

14 A Yes.

15 Q What is that exhibit?

16 A It is one of the first revisions of the QSI
17 files, just one for the QSI electric family of
18 locomotives.

19 Q Did you use the information that Mr. Pruss
20 sent to you to create that file?

21 A Some of the information that he sent me is
22 used in this; but no, I did not use it to create this
23 file.

24 Q Just to get back to some earlier questions
25 that I was asking -- you did create this file, just to --

1 A Yes, yes. I mean, it's -- yes, it is my
2 file from scratch.

3 Q Did you make choices when you created this
4 file?

5 A Yes.

6 MR. JERGER: Object to the form of the
7 question.

8 BY MS. HALL:

9 Q What were those choices?

10 A Most of the decoder files have a basic
11 format, such as for a Digitrax decoder. Where my choices
12 came in was when it really comes down to the QSI CV.PI.SI
13 formatted items.

14 Q And what does it -- you said that you made
15 some decisions related to that?

16 A Well, I designed the --

17 MR. JERGER: Object to the form of that
18 question.

19 BY MS. HALL:

20 Q Did you make decisions related to that file
21 related to the CV.PI.SI?

22 A Yes.

23 Q And what were they?

24 A One would be exactly how it should be
25 structured so that it was somewhat similar to a typical

1 decoder file that JMRI had already been making, and would
2 support all of the information that I wanted the JMRI
3 DecoderPro to be able to use to gain information and to
4 program the decoders.

5 Q Is the QSI chip an easy chip to program?

6 A Comparatively to other -- no, it is not.

7 Q On the range of complexity, where would you
8 put it -- from, say, 1 to 10?

9 A Okay. A Digitrax would be about a 3. This
10 would be an 8, 8-1/2.

11 Q How long did it take for you to create this
12 file? Over how long a period of time?

13 A Quite a while. I started on the initial
14 design in the first part of March and did not get a truly
15 good, functioning file and format until late May, early
16 June.

17 Q And you were talking about including some
18 CV.PI.SI information in this file. Which CVs does that
19 relate to?

20 A Well, if I'm not mistaken, it's Number --
21 CV 49 through 64. And the -- the whole concept of the
22 two-dimensional matrix was to be able to expand that --
23 just those few CVs to provide up to 64,000 possibilities.

24 Q And when you say "possibilities," what do
25 you mean?

1 COURT REPORTER: I'm sorry. Did you say
2 something?

3 MR. JERGER: I did. I objected to the form
4 of that question.

5 BY MS. HALL:

6 Q Let me ask it again. Is there only one
7 decoder in this -- does this file represent only one QSI
8 decoder?

9 A Yes, this one does.

10 Q So this does not represent a family of
11 decoders?

12 A Well, it's what I had defined as a family of
13 decoders.

14 Q And can you explain that a little further?

15 A There -- there are some unique properties
16 to -- to an electric that only electric locomotives would
17 have. Now, if QSI made a decoder that was specific to,
18 say, a traction trolley car, it would go in this file
19 because it would be an electric, and it would have
20 similarities to the other electrics; whereas all the
21 diesels are similar, all the steam are similar, with the
22 exception of articulated, which adds some complexity. So
23 this was my breakdown of the families of -- of decoders.

24 Q Okay. The other files that you created, do
25 they have only one decoder in them?

1 A No, the rest have quite a few decoders in
2 them, with the exception, if I'm not mistaken, of the
3 turbine. And I think that the Veranda was the only
4 locomotive that was a turbine power that has been done.

5 Q Okay. The terms that you select in this,
6 are there any limits -- all right. Let me strike that.

7 You stated that there -- that you included
8 the CVs in this file?

9 A Yes.

10 Q Are there limits to information on the CVs
11 that can be put in this file?

12 A I --

13 Q Do you understand the question?

14 A No, not exactly.

15 Q Okay. Take an example: Any QSI-particular
16 chip, what is on that chip?

17 A It's -- it's got the firmware, flash memory.
18 Bound to have some RAM as well. It's got all the sound
19 files.

20 Q Does it have CVs on them?

21 A Yes.

22 Q Does it have primary indexes on them?

23 A Yes. I mean, yes, the -- the structure of
24 the -- of the information that -- that's in the firmware
25 would all be in the decoder chip.

1 Q Does that structure limit the way you create
2 your file?

3 A I -- I'm still --

4 Q Do you understand the question?

5 A No, I'm not exactly sure.

6 It doesn't -- it doesn't limit the structure
7 of the decoder file. It -- because I could have added all
8 types of CVs that were not supported, and I could have
9 added superfluous information in here, but I didn't see
10 any reason to do that. That's why -- that's why they're
11 broken into families, is this file is much smaller because
12 it doesn't incorporate everything that QSI makes.

13 Q Was that a product of a choice of yours?

14 A Yes.

15 Q Okay. The CV.PI.SI format --

16 A Right.

17 Q -- if you want to program a particular
18 CV.PI.SI, do you have to -- do you have to program it in
19 a -- that particular format?

20 A No, it's not in that particular format; it's
21 not CV.PI.SI. In reality, what happens in the program is
22 PI is selected. It is programmed with a number, which
23 would be the PI number that you see here (indicating).
24 Then the SI is programmed with a number. The CV itself is
25 programmed with the data.

1 BY MR. JERGER:

2 Q You can answer the question.

3 A A combination of the reference manual and --

4 Q Okay. But Victoria wants us to be really
5 specific about that. What reference manual?

6 MS. HALL: Excuse me. He did not finish his
7 answer. I object.

8 THE WITNESS: Now, I will have to go back
9 through all my e-mails with Gerry Pruss and dig up
10 specifically which of the data files that he sent me
11 that had the correct order and the functions that were
12 available. So it's a combination of what was in the
13 reference manual, which was extremely limited. It's
14 the information that I got from Gerry that allowed me
15 to put these in their particular order and leave the
16 ones out that were not necessarily used in a
17 particular spot.

18 BY MR. JERGER:

19 Q Okay. It was a combination of the reference
20 manual and what else?

21 A The data files I received from Gerry Pruss.

22 Q And those are the data files attached to the
23 e-mail exhibits that we discussed earlier today?

24 A That is correct.

25 Q Okay. And when you say "reference manual,"

1 for a tape change.

2 MR. JERGER: All right.

3 VIDEOGRAPHER: Off the record at 5:06 p.m.

4 (A short recess was taken.)

5 VIDEOGRAPHER: Back on the record at

6 5:07 p.m.

7 BY MR. JERGER:

8 Q Okay. So where we left off: QSI electric,
9 QSI diesel, QSI steam, QSI articulated steam, and QSI gas
10 turbine?

11 A Correct.

12 Q Those are the five QSI files you created for
13 JMRI?

14 A That is correct.

15 Q Okay. But are they all derived from the
16 same material that we talked about with QSI electric?

17 A Yes, with the addition of -- well, they were
18 originated -- originally created from what I had gleaned
19 from my own experience, because I had bought a big
20 Broadway Limited locomotive and I gained some of the
21 default information from it and then had questions that
22 were not available from the reference material, which
23 prompted me to -- to ask in the Yahoo! Groups if anybody
24 could help me out by giving me the additional information
25 that I wanted, which is how I wound up with correspondence

1 MR. JERGER: What?

2 BY MS. HALL:

3 Q Go ahead and answer the question, Mr. Penny.

4 MR. JERGER: Don't qualify. You either need
5 to say "yes" or "no."

6 MS. HALL: As to this question.

7 BY MS. HALL:

8 Q Mr. Penny, please answer the question.

9 A Would you repeat the question?

10 Q Is there -- for CV 53, are there -- is there
11 a line that says "Output"?

12 MR. JERGER: Object to the form of the
13 question.

14 THE WITNESS: Yes.

15 BY MS. HALL:

16 Q Okay. How many -- or are there sections
17 following that line?

18 MR. JERGER: Object to the form of the
19 question.

20 THE WITNESS: Yes, the -- there are -- there
21 are lines of code after the label "Output."

22 BY MS. HALL:

23 Q Okay. Is there more than one label called
24 "Output" for CV 53?

25 MR. JERGER: Object to the form of the

1 question.

2 THE WITNESS: There -- CV 53 controls up to,
3 it appears, at least 14 outputs. So yes, CV 53 would
4 be repeated 14 times for the various outputs.

5 BY MS. HALL:

6 Q Thank you. Does that 14 repetitions appear
7 in the QSI manual?

8 A No. I mean, it -- their -- their
9 organization was totally different.

10 Q Okay. Thank you.

11 Now, before this deposition, have you had an
12 opportunity to review or -- I'm sorry. Let's strike that.

13 Mr. Jerger asked you a few questions about
14 Exhibit 107 as to the assignment that you assigned.

15 MR. JERGER: I thought you meant to strike
16 that.

17 MS. HALL: Just in case it's not.

18 THE WITNESS: Okay. Exhibit 107?

19 BY MS. HALL:

20 Q Yes, the assignment. And you have the --
21 that document in front of you?

22 A Yes.

23 MR. JERGER: I move to strike it too, then.

24 COURT REPORTER: I'm sorry?

25 MS. HALL: He's moving to strike as well.

1 Q Okay. Is there another CV after that on
2 this page?

3 A Yes, 66.

4 Q And is there another CV after this?

5 A 67.

6 Q Is there another CV after this?

7 A 95.

8 Q Is there another CV on this page after
9 CV 95?

10 A Yes, 51.

11 Q Okay. Is there another CV on this page
12 after that?

13 MR. JERGER: We can all read this document,
14 Victoria. Why don't you just ask the question?

15 THE WITNESS: Yeah. Well, there's 52.0
16 through 52.37. Not -- I mean, with absences of
17 certain numbers.

18 BY MS. HALL:

19 Q Okay. And at the bottom is there another
20 CV?

21 A 53.

22 Q Okay. So what we have here is CV 46, 62,
23 64, 66, 67, 95, 49, 50, 51, 52, and 53. Is that in
24 numeric order?

25 A No.