

1 whole new look and value for listeners in the coming days.

2 MR. LEE: Makes sense to me.

3 MR. STRUBLE: A big event for us, and I think you
4 highlighted it at the regulatory approval, this happened
5 just about a year ago now and it was a four-year cycle, but
6 the FCC commissioners unanimously approved the adoption of
7 the technology, we've got some quotes there. You don't
8 typically see this stuff out of the state commission and
9 some of the split decisions and controversial decisions of
10 late on the media side, this is a stunning counter-example
11 but I like the chairman himself who said, no more proud
12 moment for the history of the commission or the industry and
13 no more shining example of the promise of digital.

14 And I think the fact that this went through so
15 easily and so quickly is just a testimony that we had gotten
16 the right players on board, there was no competing
17 alternatives, and the benefits of digital are so compelling
18 that it was a very easy decision for the commission.

19 Probably worth highlighting is that while this is
20 an international business, the ITU, the International
21 Telecommunications Union, has approved our technology, both
22 on the AM and FM band over the last several years as well,
23 so the focus is clearly now on the states for a lot of
24 different reasons, but anyway there is AM and FM, which is
25 everywhere. HD radio is the solution and we've got the

1 regulatory approvals we need to break into those markets.

2 MR. LEE: That'll be different than television
3 then, won't it?

4 MR. STRUBLE: Sure will be, sure will be. Not to
5 say there's not other solutions out there, there are, but
6 again we believe for a lot of different reasons this one
7 makes a ton of sense.

8 We're trying to build a sustainable here that's
9 based on technology and our 85-person company is still about
10 70 engineers and scientists and again we take a page out of
11 the book of Dolby or Qualcomm, where we spend a lot of time
12 at strategic thinking around the building of our
13 intellectual property portfolio. It currently contains 90
14 separate patents awarded which we own or have rights to,
15 another 52 pending, we average about a patent every other
16 month building the portfolio.

17 We've got broad field of use rights to the Bell
18 Labs' intellectual property. One of the precursor companies
19 was called Lucent Digital Radio and it was spun out of
20 Lucent, and when we got that merger done we've got rights to
21 all 26,000 Bell Labs' patents, so that expands the portfolio
22 significantly. We believe that this is very defensible and
23 presents very, very difficult barriers who is trying to
24 replicate the business, so it's something we take very
25 seriously.

1 MR. LEE: I would imagine with that 26,000 you
2 could always find something that will apply.

3 MR. STRUBLE: You can, and it helps you as well
4 with others saying, well, you don't have the rights to that
5 and you're going to find something at Bell Labs that says,
6 well, sure we do because we have rights to that stuff. So
7 when we have guys, our engineers writing patents, they're
8 sitting with a patent lawyer who's saying, write it this
9 way, so that when somebody violates this rule we'll win the
10 case in court, and we're trying to take a long-term view of
11 building that strategic asset.

12 I'll talk a little bit about the products, they're
13 out. As we talked about most prominently on the
14 transmission side, Harris, BE, and Natel are the three
15 largest transmission equipment manufacturers. They all have
16 commercial product out there, have had for about a year.
17 Collectively they comprise about 80 percent of the
18 transmission equipment market and they all have product out
19 and it's going up on stations.

20 MR. LEE: Conceptually can I think of transmission
21 equipment as being broadcast equipment?

22 MR. STRUBLE: That's exactly what it is, another
23 name. It's a little bit easier to get it done on the
24 broadcast side than it is on the chip side because you've
25 got to get this technology down small enough and cheap

1 enough to work in consumer devices. That's being done
2 primarily now by Texas Instruments. What you see there is
3 the DRI200 chip set, that's a quarter next to it to give
4 you a sense of the size, it's about a credit card size
5 device. That is out and available, has been available since
6 the summer. TI is shipping in volume now, and the receivers
7 are coming to us from various different manufacturers.
8 These are all initial receivers which were displayed at the
9 consumer electronics show back in January in Las Vegas.

10 MR. LEE: Does that mean that this is in all of
11 these?

12 MR. STRUBLE: That's exactly what that means.

13 MR. LEE: Okay.

14 MR. STRUBLE: Every single one of those. So you
15 need a chip which really encapsulates the HD radio
16 technology and then that gets built into a radio. And we
17 expect those radios to be on the shelf later on this year,
18 early next year. So we're in the classic chicken and egg of
19 somebody's got to broadcast and somebody's got to receive.
20 The good news here is the broadcasters are being the chicken

21

22 MR. LEE: Who's deployed that stuff?

23 MR. STRUBLE: Sorry?

24 MR. LEE: Who's deployed that stuff?

25 MR. STRUBLE: You're a good straight man. Right

1 here, the shaded states and then the stars represent markets
2 that we are currently up and operating in. Seventy-five
3 different groups, including everyone in the top 10, I
4 believe, have begun to deploy the technology. We have 191
5 stations currently licensed and in the process of getting it
6 on the air. That represents 32 different states, every one
7 of the top 10 markets, and 40 of the top 50.

8 MR. LEE: I'm right here. What does the blue star
9 mean?

10 MR. STRUBLE: The blue star there means we've got
11 Tampa, and if I'm remembering it's WUSF, does that sound
12 right?

13 MR. LEE: Yeah, that would be an educational
14 station.

15 MR. STRUBLE: It's the public radio station is up
16 and operating and I think there's a few others as well. So
17 that means that there's at least one digital radio stations
18 and probably even on the air operating in this market.
19 We've got, I want to say 10 different licensees in New York,
20 in flagship stations like WNEW, WOR in Los Angeles, you've
21 got KROQ on the air, so it's moving. A little bit again
22 premature for them to be doing a ton of promotion because
23 there's no radios that people can buy yet. Those will be
24 out on the shelves a little bit later, but we're getting the
25 station infrastructure in place and covering all those major

1 markets.

2 MR. LEE: Okay. And when can we buy these radios,
3 you say this Christmas?

4 MR. STRUBLE: Probably more realistically early
5 spring next year, so probably CES launch, the way the
6 consumer electronics industry launches is everything gets
7 launched at that big show in Vegas in January and then you
8 see it on the shelves for the spring selling season.

9 MR. LEE: And when do you think the auto
10 manufacturers will offer it?

11 MR. STRUBLE: You'll see it beginning late next
12 year in '05 model years, '04 calendar years, that will be in
13 a select few luxury lines, but you'll see it more broadly in
14 the '06 car model years, the '05 calendar year.

15 MR. LEE: I'm presuming that's a key development in
16 the auto.

17 MR. STRUBLE: It is. It takes a little bit longer
18 and of the 70 million radios that I talked about, 17 million
19 are sold in cars, so it's a significant percentage, but it's
20 also where a lot of radio listening is done. And what
21 typically the roll-out cycle is, you get it done in the
22 after-market, that's the guy who goes into Circuit City or
23 Best Buy and buys the car radio and has it swapped out, and
24 there's 6 million of those that are sold every year, so it's
25 a little bit easier to get it done there. That will be the

1 first stop, but we have a Detroit office, small little
2 company like ours, and we're working actively with most if
3 not all of the major manufacturers on that.

4 MR. LEE: I guess what'll be important is to see
5 what applications are most popular, like the GPS thing and
6 the weather and the traffic thing, that could really be
7 important.

8 MR. STRUBLE: We think so. The auto

9 MR. LEE: Would that be up to the GPS guys to
10 basically build a radio or would that

11 MR. STRUBLE: No, actually, if you think about it,
12 to use an extension, the On Star technology, how the
13 security feature works, if you get in a car crash, you know,
14 there's an automatic call which goes out over your On Star
15 cell phone to a service center, the GPS has positioned you,
16 and some service rep comes on the line and says, Mr. Lee,
17 you're at Fifth and Main, what's your problem? And that's
18 just a question of transferring data between two separate
19 devices and that's exactly how it'll work here. The
20 technology is not the difficult part.

21 MR. LEE: So Kenwood needs to coordinate with
22 who's the GPS manufacturer?

23 MR. STRUBLE: To be honest, I don't know. There's
24 several of them, but

25 MR. LEE: The two of them need to coordinate,

1 right?

2 MR. STRUBLE: It's actually both of them need to
3 have an input/output data port and then one guy has to take
4 the data and do something with it, but it's not particularly
5 difficult.

6 MR. LEE: Would these be infrared?

7 MR. STRUBLE: Could well be, could well be, or, you
8 know, you have a lot of people saying Bluetooth in the car
9 is going to be the way to go and that could be the case.
10 There's a lot of standards around what is the appropriate
11 bus link-ups amongst all the various electronics in the car,
12 so you'll ride one of those two platforms.

13 MR. LEE: I'm assuming that traffic information
14 would be incredibly value.

15 MR. STRUBLE: A lot of people believe traffic's the
16 killer app, and we certainly would not argue with that. One
17 of the major needs for information is traffic, and people
18 want it when they want it, and to be able to get it at the
19 touch of a button and customize to your route, if you're
20 driving in from New York, you know, you're here in either
21 Connecticut or Long Island or New Jersey and you know you're
22 driving in from Long Island every day, so maybe you've got a
23 separate filtering feature that just says, give me a much
24 more detailed look on Long Island as opposed to hearing
25 what's going on in Westchester and Connecticut and Jersey.

1 So a lot of stuff like that is going to it's not at all
2 difficult, but it takes time to develop the apps and to get
3 the infrastructure in place, but you see the infrastructures
4 going up.

5 To talk a little bit about our investor base, we
6 talked about the political aspect of building the broad
7 coalition. We did a lot of that through investment, and you
8 see here again the radio broadcast industry, all the major
9 names, every one of the top 12, 15 of the top 20, they
10 account collectively for half of the industry's revenue, so
11 half of the industry are investors in our company. It's
12 given us the ability to go out and say to manufacturers, to
13 investors, the industry is behind us, they're going to make
14 this work, they've invested in our company, they're giving
15 us their time and their money and that's been enormously
16 valuable.

17 You see a good group of financial investors. I
18 mentioned JP Morgan, Pequot, Grotech, New Venture Partners,
19 which is the former Lucent New Venture Group, spun out a
20 host of others. And then we've added some key strategic
21 technology owners like a Ford, like a Visteon, who builds
22 radio, like a Texas Instruments, who's going to build chips,
23 or Harris, who's the largest transmitter manufacturer, using
24 investment I guess to strategically get everybody in lock-
25 step and have the proper incentives to take the thing

1 forward.

2 MR. LEE: This makes a lot of sense, but you know,
3 and this isn't a challenge either, but maybe just an
4 opportunity for you to provide an explanation, this reminds
5 me a lot of what Excite used to say, not Excite, what was
6 it, At Home.

7 MR. STRUBLE: Right, with the cable guys.

8 MR. LEE: Yeah, and it made all the sense in the
9 world, but for some reason it didn't work.

10 MR. STRUBLE: Yeah, I think, you know, the answer
11 is, I think these things are more difficult when you have,
12 and we took a good look at At Home, when you have competing
13 interests, and in that case you really did, as to who was
14 going to build the box, who was going to control the box,
15 what way would the pie be divided. Those issues again
16 either by design or by luck don't present themselves in
17 radio. The radio manufacturers are not going to be
18 challenging Sony to build radios, it just isn't going to
19 happen. Nor is Panasonic going to start buying radio
20 stations or trying to claim radio spectrum, so again these
21 are long and well-established industries.

22 We're going through the channels that have been in
23 existence for some time and I think the basic common
24 motivation has been, for different reasons but the same
25 basic motivation, to get this thing up and operating and

1 start selling radios and getting stations on the air as
2 quickly as we can. So we have not run into those issues,
3 not to say that there's always agreement in the investor
4 base, there's not, but I think that's the case with any
5 company, and I'd argue that the track record up to this
6 point would say that it's been much more of an asset than it
7 has a liability.

8 MR. LEE: I think you've got a very smart strategy
9 that looks like it's being implemented well from the point
10 of view of not only the technology but from the ownership.

11 MR. STRUBLE: Well, you know, I got that book you
12 talked about, so we tried to

13 MR. LEE: That is a fascinating book. I tell you,
14 there was so much politics involved in that.

15 MR. STRUBLE: Believe me, we could tell some
16 stories. Sometimes we say the job is a little bit like
17 managing the United Nations because you do have a lot of
18 players and you need to make sure that you get to a common
19 motivation and common incentives and, you know, I'm
20 balanced, I think we've really done that.

21 To talk about the business model a little bit for
22 the financially oriented of your listeners, it is a classic
23 licensing model. The basic concept is anytime that anyone
24 uses the technology, we get paid, so you see a per-unit fee,
25 when a receiver is sold for the use of the intellectual

1 property, when a semiconductor is build we provide software
2 so we get a fee for that, every time a transmission
3 equipment box is sold, and then we have audio compression as
4 well as Sirius satellite radio uses our audio compression.
5 So those are the per-unit fees, and on the software side,
6 you know, much like when you buy a PC you pay Gateway for
7 the hardware but you also pay Microsoft for the embedded
8 software, the broadcasters have a license both for the main
9 audio programming and for the wireless data, and that's a
10 classic software use type of model, you know, site license
11 for a station.

12 So what you see there are multiple IP licensing
13 revenue streams. If one of them does not quite materialize
14 as we would hope there's plenty of others to fall back on,
15 and the cost base is relatively fixed and low. We do have
16 people that you will see HD radio 2.0 and 3.0 and 4.0, so
17 continuing development, but the major lifting has been done.
18 There is ongoing marketing, but that's really something
19 that's borne by the device manufacturers and the
20 broadcasters who are going to be promoting. We have to
21 defend our patents and issue new ones and certainly turn on
22 lights, but that's a relatively low and fixed cost base, and
23 you get to what we call the Qualcomm-like margins when you
24 get to scale and that's 80, 90 percent operating margins.

25 And the other attractive feature from a

1 risk/reward standpoint of the business is there is not
2 capital in this business. We don't have plants, we're not
3 building anything, we're not launching anything, so the
4 attractive margins hold out both on a cash and an operating
5 basis, which hopefully again provides a pretty good
6 risk/reward profile for prospective investors.

7 MR. LEE: And I was just going to point out, this
8 right here is very similar to Dolby.

9 MR. STRUBLE: Yeah, exactly.

10 MR. LEE: And as a matter of fact, Dolby, every
11 time you buy a piece of hardware and Dolby's in there,
12 you're going to see the Dolby trademark, and the interesting
13 thing is, I know a company, Intervideo, that makes DVD
14 software players, and they've got to pay Dolby, and the
15 interesting point is that even though they have a software
16 player they've got to pay Dolby.

17 MR. STRUBLE: That's exactly right.

18 MR. LEE: The interesting point is that Microsoft
19 won't pay Dolby, so the DVD players that get into your Dells
20 and what-not are not Microsoft products.

21 MR. STRUBLE: That's right.

22 MR. LEE: Because Microsoft refused to pay that.
23 So that provided an opening for somebody else to get in
24 there, but what it really shows is how strong Dolby is.

25 MR. STRUBLE: Well, they've got the technology and

1 it's the standard, and I think it shows the power and this
2 is, you know, Microsoft is in the same boat. If you get a
3 technology which is being built into millions of devices and
4 is the standard, that's a good business, and that's the
5 model here. And Microsoft, certainly with Windows, has
6 established that position and benefits from it.

7 MR. LEE: What I'm trying to point out is that even
8 as mighty as Microsoft is with, what, \$50 million in cash?

9 MR. STRUBLE: Right.

10 MR. LEE: They couldn't bully Dolby.

11 MR. STRUBLE: No, they can't because the technology
12 is there, and again hopefully if we're doing our job right,
13 the strategy around intellectual property development and
14 protection supports this strategy. We believe we have a
15 lock-tight position and we've got every single patent that
16 has ever been issued in this field and nobody else has any.
17 So we know from an intellectual property standpoint that
18 anytime anybody is either broadcasting or receiving HD radio
19 they are using our technology, and if they're not a licensee
20 they're in violation of our intellectual property.

21 MR. LEE: Right.

22 MR. STRUBLE: So we've been able to in the
23 development of the company examine a lot of the successful
24 licensing models, Gemstar again prior to the TV Guide
25 acquisition, Qualcomm is a fantastic example, Dolby is

1 another good example, private companies are a little bit
2 more difficult to get good data on, but we try to structure
3 our agreements, our checks and balances and the business
4 model in a way that reflects a lot of the successes those
5 companies have had.

6 Two big assumptions, obviously, how quickly do
7 people buy radios, how quickly do stations go on the air.
8 On the left chart here you see the station predictions.
9 We're targeting by the end of this year 250 licensed and on-
10 the-air updates. This number is actually off, we're up to
11 191 right now, so that's tracking quite well, you know, we
12 would see a normal ramp. And the blue bars are the
13 cumulative stations but the red and yellow line is the
14 annual, and you get to about 800 a year, which is the
15 typical replacement cycle for stations.

16 There's 13,000 stations in the country and every
17 year you're going to have 800 swap out their transmitter and
18 you get to a point where it's not a tough decision, just the
19 next time the transmitter breaks they buy digital instead of
20 analog, and that's sort of that steady state rate that you
21 get to over time.

22 And on the right hand chart what you see is
23 predicted uptake on the receiver side and this is an
24 absolutely standard consumer electronic product uptake. If
25 you looked at VCRs or DVDs or cell phones or cameras or

1 what-have-you, it would look like this. You're talking
2 about getting to a 10 percent penetration rate, four or five
3 years out give you rough numbers, this year we're talking
4 about low thousands of units, next year we'll probably be
5 talking about getting into hundreds of thousands, and you
6 get to millions by the third year out.

7 The business works fine on this. If either of
8 these things go quicker, life's just better because of the
9 scale of business, you just collect a little bit more
10 checks. So the DVD model, for instance, DVDs are great
11 products, we'd argue that the radio target market is a whole
12 lot bigger, but DVD arguably in the third since after they
13 got DVX versus DVD-covered, they sold 13, 14 million units.
14 So if you look at our '05, we're considerably below that.
15 Hopefully this is a conservative model, we'll see, but the
16 business works fine with these sorts of projections.

17 MR. LEE: That's interesting. And this is just
18 North America?

19 MR. STRUBLE: Yeah, that's exactly right. That's
20 just the U.S. and everything I've said about units, multiply
21 it by four to get the worldwide units, so you know, 70
22 million radios is 280 million worldwide, and 800 million
23 installed is roughly around 3 billion, 3 billion radios
24 worldwide. The average family in this country has 6, count
25 your clock radio, your boombox, your home stereo, your car

1 radios, you're going to get there pretty quickly. And our
2 motto is that all of those radios are going to be digital
3 pretty soon or hopefully pretty soon.

4 To give you a sense of our fundraising, we talked
5 about it a little bit. There's been about \$145 million
6 invested in the company to date. The original seed capital
7 came from Terence, about \$30 million back in the broadcast,
8 and Lucent as I mentioned funded Lucent Digital Radio. And
9 we've done four rounds of private equity since then in all
10 different kinds of market conditions, good and bad, and are
11 very well capitalized at this point, so

12 MR. LEE: Was that your last one?

13 MR. STRUBLE: That's the last one.

14 MR. LEE: Do you anticipate any more before you do
15 an IPO?

16 MR. STRUBLE: I would think we'd need one more top-
17 off round, which would we're well capitalized now. We've
18 got over a year of cash still in the bank, but I would
19 envision one more private round, and having a flavor of what
20 used to be called mezzanine or the last pre-IPO round. I
21 don't know if that stuff exists anymore, but that's sort of
22 where we are as a company, so well-capitalized, lot of good
23 investors.

24 MR. LEE: When do you anticipate doing an IPO?

25 MR. STRUBLE: The right answer is probably, ask the

1 markets, but if it's a question of getting to critical mass
2 in terms of revenue and cash flow, you know, just go back
3 and look at that receiver uptake curve and if you get to
4 anything meaningful you're probably talking '05, '06. What
5 we hope to be in this company is in a position that the IPO,
6 because the capital requirements are not great, the IPO is
7 not a fundraising event, it's a liquidity event, and the
8 company can do it at a time when value and market conditions
9 are optimal as opposed to needing to run out and raise some
10 money because we need to raise some money. We just don't
11 spend a ton of cash.

12 MR. LEE: So in other words, this final mezzanine
13 round that you do, you think that'll probably come from your
14 existing VCs?

15 MR. STRUBLE: I would think almost certainly, but
16 you know, stay tuned. We believe that the intrinsics are
17 right for this to be a public company, you know, there's a
18 lot of good comps out there which have traded pretty well
19 and we certainly have the discussions going on, but again we
20 hope to be in a position where that is just a financing
21 event, not a major life-changing event for the company.
22 We're worried about building a good company not about doing
23 an IPO.

24 MR. LEE: A liquidity event you mean.

25 MR. STRUBLE: Exactly right.

1 MR. LEE: Now if the investment bankers want to
2 jump on you like a hawk on a field mouse, where do they need
3 to go to?

4 MR. STRUBLE: Me or the CFO.

5 MR. LEE: Where are you located, in Virginia?

6 MR. STRUBLE: We're in Columbia, Maryland. The Web
7 site's got all the information, it's iBiquity.com, and we
8 have, the charts are not in here, but we have a very active
9 following on Wall Street. We call it unprecedented for a
10 private company been written about separate reports on
11 iBiquity by analysts on the radio side because it represents
12 a very major change to radio broadcasting, and the analysts
13 want to be telling their institutionals what exactly is
14 happening. So we've appeared in dozens of reports on Wall
15 Street and have good relationships there and hopefully that
16 speaks to the fact that people think we have some potential,
17 so we shall see.

18 And that's our story. We think it's a large and
19 obvious business opportunity that radio is not going to be
20 the only analog medium in a world that's fully digital.
21 Everything else is already digital. Radio is going to be
22 too and we are the company that has been set up and is the
23 only one doing it. We'd like to believe at this point we've
24 got a track record to lead investors to think that the
25 strategy and execution can provide some commerce and we

1 actually get this done.

2 The technology is driven by the marketplace, it's
3 defensible, it's in the process of being commercialized,
4 we've been successful in building a very broad coalition
5 across several industries of folks working together to make
6 this happen. We did get our bellwether FCC approval, a lot
7 of deals in place, and that would take any doubt about our
8 pricing capability off the table. These deals are all done,
9 we have our licensees in place.

10 And, you know, we hit our numbers. We get stuff
11 out month to month, quarter to quarter, and the operational
12 track record hopefully again provides some comfort that we
13 can get this thing done.

14 MR. LEE: Okay. Well, it's been a good interview
15 for me and I think you've covered it pretty thoroughly, and
16 I've actually taken more of your time than I expected, so I
17 guess unless you have any other comments you'd like to make
18 we can call it a wrap.

19 MR. STRUBLE: That's good. Thanks for the time,
20 and again a lot of the information, a lot of the stuff we
21 talked about or more detailed stuff is on the Web site,
22 iBiquity.com, and we're happy to entertain discussions with
23 folks who've got questions or interest.

24 MR. LEE: All right, well I'll conclude this here,
25 but hang on when I cut it off. This is Phil Lee for Inside

1 Digital Media and Bob Struble for iBiquity and that is a
2 wrap.

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