**Invisibilia: Our Computers Ourselves**

**Part 1: Computer Or Human? + Thad**

ALIX SPIEGEL, HOST:

This is INVISIBILIA, stories about the invisible forces that shape human behavior. I'm Alix Spiegel.

LULU MILLER, HOST:

And I'm Lulu Miller. Let's begin today the way any good apocalyptic horror movie begins - on a sunny day.

STEVE BARKLEY: It was a beautiful day, beautiful morning. I was sitting out on the back patio. I was having coffee. And I thought, I think I'll walk out front and check the mail.

SPIEGEL: This is the early '90s, 1991 to be exact. We are in central California. And this is our main character, Steve Barkley.

BARKLEY: So I walk down the driveway, opened up the gate, went to the mailbox, and there's this letter from the Campbell Police Department. And I went, well, OK, so I opened it up, and there is a picture of me.

SPIEGEL: It was grainy...

BARKLEY: It was black-and-white and grainy.

SPIEGEL: ...But it was him, seated in the front seat of his car, hands on the steering wheel, obviously in the midst of driving somewhere.

BARKLEY: And I was smiling in the picture.

SPIEGEL: And alongside this grainy photo of him in his car was a document.

BARKLEY: It was a photo speeding ticket in the amount of $45. And I went, what?

SPIEGEL: Now again, this was the early '90s. At that point, photo traffic enforcement was basically unheard of. In fact, California was one of the first states in America to introduce it. So Steve had never encountered this idea that he was automatically being watched by machines.

BARKLEY: This is - I felt violated. I felt violated because no human was involved in this whole ordeal. And I thought, wow, this is like - this is very robots-take-over-the-world type of thing.

SPIEGEL: And he didn't like it. So he started thinking.

BARKLEY: I stood there for a few minutes and stared at the picture and the letter and went into the house because my wife had a Xerox machine in her office.

MILLER: And he thought, OK, machine, you want to take a picture of me speeding? Well, then here's a picture of money.

BARKLEY: I took two 20s and a 5, Xeroxed them and sent it back to them.

(LAUGHTER)

MILLER: He said his message was simple - the computers cannot control me.

BARKLEY: Yes, yes.

SPIEGEL: And after he dropped that letter in the mailbox, he felt really good.

BARKLEY: You know, the machine challenged me, so I challenged the machine.

SPIEGEL: And then he waits. And then a couple weeks later, on another beautiful California morning...

BARKLEY: Walk down the driveway, opened up the gate, went to the mailbox, and there's another letter from the Campbell Police Department. And I - you know, I was going, oh, boy, where is this going to go? And I opened it up, and...

MILLER: And it's a Xerox...

BARKLEY: One sheet of paper.

MILLER: ...Of handcuffs.

(LAUGHTER)

BARKLEY: And I looked at it, and I thought, touche, sir, well done, well played. This guy's got a sense of humor. I like this. And because of that...

MILLER: Proof of an actual human being playing with him at the other end of the computers.

BARKLEY: ...I mailed in the fine.

JIM COST: Hello, Alix and Lulu.

MILLER: This is the man who actually sent that Xerox of handcuffs to Steve - Campbell Police Chief Jim Cost. He recently had throat cancer, which is why he is speaking using a device.

COST: My artificial voice. I ordered George Clooney but they sent me this one, which is short of Darth Vader.

MILLER: Cost was the person responsible for the introduction of photo enforcement in his town. And he was getting a ton of hate mail about it. But Cost was unrepentant.

COST: I did it to save lives and to reduce injuries, and I would do it again.

SPIEGEL: Because Cost believes using the computers to monitor people worked. It reduced accidents and deaths.

COST: Yep.

SPIEGEL: Now, we are talking about this story today because though we live at a very different moment in time, many of us continue to struggle with the role of computers in our lives. Some, like Steve, feel definitively uncomfortable about it.

BARKLEY: The way that people have just acquiesced is really surprising to me. I don't think I saw it coming back then. I really don't.

SPIEGEL: There are also people who embrace it completely. But most of us, like Jim Cost, are less certain. Again, Cost was the man who brought computer surveillance into his town, and he feels great about that. But still he says even he is uneasy about many of the new intrusions that crop up every day.

COST: I went into Starbucks today with my phone. And the app that I used to pay my bill, they said, oh, we're updating that. When you walk in the door soon, it'll tell us what you normally order, and it'll be able to pay for it. You don't even have to take it out of your pocket. And I looked at my wife and I said, is that good or is that creepy?

SPIEGEL: Is that good or is that creepy? Cost, like the rest of us, just isn't sure how all this stuff is going to affect us.

MILLER: This is INVISIBILIA. I'm Lulu Miller.

SPIEGEL: And I'm Alix Spiegel.

MILLER: What we do on our show is look at invisible forces and examine how they shape our lives. And today the invisible force we are looking at is computers, which are very visible. But the way they have been creeping into our minds isn't always.

SPIEGEL: That's right. So for the show today, we are going to take on this question. How do computers change us? Is it in a good way or a creepy way? Stick around. We're going to talk to psychologists and cyborgs and bullies to see if a computer can change who we are.

MILLER: OK, Alix, you want to get us started?

SPIEGEL: Yeah, let's begin with a cyborg - a highly respected, profoundly influential cyborg.

THAD STARNER: Should I close this?

SPIEGEL: All right. All right, let's close this. This is good.

Recently, I went to see this highly respected cyborg in his office. His name is Thad Starner. And on the shelf by his desk was a small, metal box he pulled out for me.

So can you just describe it a little bit?

STARNER: Sure. So this is a box. This is about eight and a half inches by two inches.

SPIEGEL: Kind of messy.

STARNER: Kind of messy. Well, it's kind of old at this point.

SPIEGEL: Twenty-one years ago, in 1993, Thad took this box, which houses a computer hard drive, and strapped it to his body with a whole bunch of other hardware. He had a three-pound battery...

STARNER: Lead-acid battery about the size of a motorcycle battery.

SPIEGEL: ...A huge 1990s modem.

STARNER: I plugged that into a car phone.

SPIEGEL: There was a small, one-handed keyboard called a Twiddler. It has, like, a handful of keys that are played kind of like chords on a piano so that words can be typed really, really fast.

STARNER: There's a little mouse on it.

SPIEGEL: Oh, that's a little mouse.

STARNER: Yes, a little force joystick.

SPIEGEL: Finally, Thad had a computer screen for just one eye that he jerry-rigged to some safety goggles. It was black and originally covered all of his left eye - making him look kind of like a 21st-century pirate with a large mechanical patch.

STARNER: Yeah.

SPIEGEL: Now, Thad actually had a name for this contraption. He called it Lizzy.

STARNER: Because the first production car - the Model T Ford - it was called the Tin Lizzy.

SPIEGEL: OK, so how long did you live with this on your body?

STARNER: Well, the original Lizzy - I probably lived with it for about three years.

SPIEGEL: But after Lizzy One, there was Lizzy Two. In fact, for the last 20 years, Thad has been wearing a computer of one kind or another continuously. Besides the days that he's taken his computer off to fix it or improve it, really the only time Thad Starner hasn't had some kind of computer strapped to his body was when he was in bed or in the shower or getting married.

STARNER: Yeah, that's the case.

(SOUNDBITE OF MUSIC)

SPIEGEL: What happens when you mix man and machine - try to truly fuse a computer with your brain so that it changes the way that you think? This, by the way, is not an academic question. As time goes by, computers get smaller and closer to our bodies. They began as full rooms. Now they're a slab called a smartphone that we carry in our pockets. But eventually, a lot of people are betting that there will be a more intimate integration, computers we physically wear and are seamlessly woven into who we are and what we do.

Actually, Thad has played a role in the creation of one of the wearables that's recently caused a lot of controversy, Google Glass. He was its technical lead. So I wanted to meet Thad because of all the people in all the world, he's voluntarily lived his life fused with a computer for the longest - 21 years. Also, he's a professor at Georgia Tech, on the payroll at Google - so officially, he spends a lot of time thinking about integrating people and machines, what you get from it and why it seems to make people uncomfortable.

STARNER: You can actually look at people who believe that what I'm doing is a sign of end of times. So (laughter), you know, it's - when you put stuff out there like this, it caused a lot of commentary about stuff. But that's only 'cause I'm the first.

(SOUNDBITE OF MUSIC)

SPIEGEL: Ironically, the story of Thad Starner, cyborg, begins in one of the least technological places in the U.S. - Amish country. Thad grew up in Dallastown, Pa., a small town near Lancaster and its Amish farms that didn't much appeal to him.

STARNER: There was nothing around of interest - of intellectual interest. Rural, suburban Pennsylvania is really quite boring. (Laughter). Cow tipping is actually a sport.

SPIEGEL: But then, around 1982 when he was 12, Thad got a computer and started programming and building games, and everything changed.

STARNER: It really was a world where I could be creative - could have control of things, could actually make a new environment. And that is really fun.

SPIEGEL: And then when Thad was 14, he had an experience which made him think that computers could be about more than just fun, that computers if properly constructed, could profoundly enrich the experience of being human.

STARNER: I was learning trigonometry. And I went to my father - he was a power engineer - and said hey, can you help me with this homework? My father looked at it for a few minutes and said nope, I can't. I really don't remember it. Hold it - you're telling me that you knew this stuff at one point, but you forgot it? So I resolved right then and there that I was going to find a way not to forget my lessons. I found that that idea that I could gain understanding of something and then forget it was intolerable to me. It was just a sense of loss - it's like losing a chunk of yourself.

SPIEGEL: The answer, Thad was certain, was computers. Computers are great at remembering stuff. You just needed a way to weave them into your day-to-day life. And this feeling that humans could greatly benefit from more integration with computers - only intensified after Thad went away to college at MIT.

STARNER: My sophomore year, I started getting classes that - when I'm being taught by the world's masters, I found that I either could pay attention in class and get a good intuition for what the professor was saying or I could take good notes - but I could not do both.

SPIEGEL: Having to turn his attention away from the professor, concentrate on taking notes on paper or a laptop - that made Thad lose the knowledge he so much wanted to have. And he needed to fix that. And then one night, totally by accident, Thad happened on an answer.

(SOUNDBITE OF COMMERCIAL)

UNIDENTIFIED ANNOUNCER: In the 21st century, a weapon will be invented like no other.

SPIEGEL: Arnold Schwarzenegger.

(SOUNDBITE OF COMMERCIAL)

UNIDENTIFIED ANNOUNCER: "The Terminator."

SHAWN SCHEPPS: (As Nancy) You're dead, honey.

STARNER: So think about "The Terminator" - the first movie, the view from the Terminator's eyes. It's all this code and little pieces of a text. There's one section where somebody is addressing him - knocks on the door on his hotel room.

(SOUNDBITE OF FILM, "THE TERMINATOR")

UNIDENTIFIED ACTOR: (As character) Got a dead cat in there or what?

STARNER: And up comes this screen of different things he might select to say in return.

(SOUNDBITE OF FILM, "THE TERMINATOR")

ARNOLD SCHWARZENEGGER: (As Terminator) [Expletive] you, [expletive] [expletive].

STARNER: I sat there looking at that going, there's my solution, having a head-up display where I could actually overlay it on the real world and have the information that I need right there as I'm looking at the blackboard - that's what I need. That's when I decided to make the machine.

(SOUNDBITE OF MUSIC)

SPIEGEL: It took a long time - and one rather unfortunate experience where he set himself on fire - but finally, one happy spring afternoon in '93, Thad clamped a screen to his face, wrapped connecting wires around his torso and Lizzy was born - 9 pounds in all - but still. Thad and his computer were joined.

And, like, when you put it on did you feel like, I am a cyborg now?

STARNER: No, I felt that I needed - all I could think of is I need to improve this. (Laughter).

SPIEGEL: But as Thad tinkered, Lizzy improved - became lighter, smarter, and as a she got better, Thad realized all kinds of things, like Lizzie wasn't just helpful inside a classroom; she was probably more helpful outside it because Lizzy allowed Thad to retain all the interesting things that people offered him all day long - in the hallway, at lunch.

STARNER: Any time somebody said anything interesting to me from then on, I'd type it in real quick. And the thing is it wasn't obtrusive because I had my one-eyed screen up, I have my keyboard in my hand. And so I could sit there - have this very deep discussion with somebody and take really good notes on it.

SPIEGEL: To make these notes even more valuable to him, in the fall of 1993, Thad and another MIT student named Brad Rhodes designed a program to run on Lizzy called the Remembrance Agent.

STARNER: So the remembrance agent is something that tries to pull up information that's relevant to your conversation as you need it.

SPIEGEL: Basically, as Thad was talking to somebody, subtly taking notes with his hand, Lizzy would shuttle through all of the information that Thad had ever entered into her system on the topic that he was talking about. And on the bottom of the screen in his eye, she would offer him, like, three short lines of information.

STARNER: Think about if you're just typing a Google search all the time on your personal notes for every sentence you said. Most of the time, it's going to come up with garbage - stuff you don't care about. But occasionally, you look down, and it says, oh, I'm talking about the remembrance agent. I should talk about my qualifying exam experience.

SPIEGEL: Actually, as we were talking, Thad did have in front of him the memories he'd catalogued in his remembrance agent about his remembrance agent, and a link had caught his eye.

STARNER: I just pull up a file that says qualifying exam anecdote. And then I'm ready to actually talk to you about this anecdote.

SPIEGEL: So we talked about the anecdote - how Thad, after years of wearing Lizzie, had showed up at his PhD qualifying orals with Lizzy on him as she always was - how, as the panel of professors quizzed him, she had been there in his eye the whole time, gently guiding him, cuing his memories, which, at the end of the exam, had prompted a debate among his examiners. Was it fair to give Thad alone a PhD when he had Lizzy there helping him?

STARNER: It was a half-hour flame-fest. And I almost got a PhD that said, the faculty of MIT hereby convey upon Thad Starner and his wearable computer the degree of doctor of philosophy (laughter).

SPIEGEL: They wanted to do that?

STARNER: They were arguing whether or not they should do this. First of all, they argued - they said it's fair. They said, yes, it's fair 'cause he always has it on. We're testing the student as he will be in the real world. And he has shown, through using this thing every day for years, that this is how he's going to be in the real world. So yes, this is fair.

SPIEGEL: It's tricky sometimes, when you're fused with a computer, to know where one ends and the other begins. But Thad was always untroubled by the blurring of that boundary, probably because it was so much fun to see what would come of having your brain augmented by a computer. For instance, Thad noticed Lizzie was changing his social interactions because whenever Thad was talking to somebody, Lizzie would instantly bring up notes on their last conversation. And often in those notes was the kind of small, personal information we often forget.

STARNER: I would have information like oh, yes, Kenji, I know your - last time we talked - your daughter was going to college. So how's she doing? What's she majoring in? Would I normally be able to pull up those facts? No, I won't even remember that Kenji has a daughter.

SPIEGEL: And did that change the way that people responded to you?

STARNER: Oh, yeah, of course because suddenly you're interested in them.

SPIEGEL: Or maybe the machine is interested in them. Again, an outsider might see a confusion of man and machine that cheapens the interaction. But Thad didn't see it that way. He felt Lizzy was helping him to be a better human.

STARNER: I found out very quickly that having these notes on my eyeball while I was talking to some people made the conversations deeper 'cause I could pick up where we left off.

SPIEGEL: There were other changes, too. Lizzy organized his schedule, kept Thad on time, allowed Thad to do more, more quickly. Which led to other changes. Like, emotionally, did it change you?

STARNER: It makes you more confident.

SPIEGEL: Did make you feel more powerful?

STARNER: Well, clearly.

SPIEGEL: Think about it. Thad was probably the first man on earth who truly didn't have to ask for directions because like smart phone carriers today, he could access maps on the World Wide Web. His memory was basically endless, and he could provide the most obscure facts pretty much instantaneously, almost without breaking eye contact. Remember, this was the mid-'90s. The iPhone, which gave many of these abilities to the rest of us, didn't show up until 2007.

So did you feel superhuman?

STARNER: Yeah, you really do feel superhuman at that point.

SPIEGEL: And that was a comfortable feeling.

STARNER: And it's one of these things where you have - it's physically reassuring because it's always there. It's always this particular weight and feel to it. And it represents a certain amount of power and control over your life. It's this information security blanket - literally, a physical presence. You felt it. It was with you.

SPIEGEL: Like, at night, when you took it off, did you feel weaker?

STARNER: I don't know 'cause I just - I always had it within a few feet.

SPIEGEL: After just one month, Thad knew he was never going back. He was not going to be just a man again. But somehow, it was hard to explain to the average non-computer-wearing person what was so compelling about it.

STARNER: For the life of me, I couldn't describe to people why this was revolutionary.

SPIEGEL: But there was a small group of people who knew exactly what Thad got from Lizzy. See, after college, Thad went on to grad school at MIT - the MIT Media Lab, this training ground for computer geeks like Thad who wanted the future to happen sooner rather than later. And after Thad started wearing Lizzy, others there picked it up.

Hi, is that Rehmi?

REHMI POST: Yes, how are you today?

SPIEGEL: Rehmi Post is one of the people that Thad influenced. He now helps Samsung build wearables. And like Thad, when Rehmi wore a computer in the 1990s, he found it transformative, particularly when it came to his social life.

POST: That really was the strangest thing about it. It made me better at being with people because I realized I was not so aware of what was going on with other people and that there were cues that I could get simply by attending to information, like how I met them because the wearable would bring that to my attention and would really - sort of taught me how to be better at that.

(SOUNDBITE OF MUSIC)

SPIEGEL: By 1996, almost a dozen people at the lab were wearing a computer. There was even a name for the group, taken from the "Star Trek" episodes of the early '90s. They were called the Borg.

MAGGIE ORTH: They started showing up in my office because their wires would break. And I was a girl, and I also knew how to make things - just could make anything.

SPIEGEL: This is Maggie Orth, a former artist who went to the Media Lab and was one of the few women associated with the Borg. She says she became friends with them because she liked their spirit of experimentation. They would try anything. Like, they linked up their Remembrance Agents so that they could completely share memories and experiences and then tried to function as a super organism with a mind that had access to collective intelligence, which is pretty darn cool.

ORTH: People did all kinds of crazy things. And it was the '90s. And they did it because they didn't know. It was for - they wanted to find out.

SPIEGEL: Maggie says the Media Lab, at that moment anyway, was just a profoundly blue-sky place. Everyone was excited about all the incredible ways computers would transform us.

ORTH: They were nothing critical. There was no critical reflection at the lab at that time, but that - I did not see that as bad. I actually thought it was quite refreshing, and it enabled people to make all kinds of things that they never would have made otherwise.

(SOUNDBITE OF MUSIC)

SPIEGEL: And I have to say, after talking to Thad, I got the sense that he really retains this utterly blue-sky view of computers.

STARNER: The device was literally life-changing.

SPIEGEL: Were there any negatives to it? Like, did you - did some people find it harder to be intimate with you?

STARNER: No. Catching fire was probably the biggest negative (laughter).

SPIEGEL: But there were no - there was no downside to being synthesized with your computer?

STARNER: I can't think of anything, except for the obvious. I mean, the obvious thing is, you have to charge it.

SPIEGEL: OK, that wasn't what I expected you to say (laughter).

(SOUNDBITE OF MUSIC)

SPIEGEL: That's not the only bad thing that can happen from having a computer so intimately integrated with you.

STARNER: Well, let me pull up what reporters often suggest to me are bad things.

SPIEGEL: So Thad turned to his Remembrance Agent and pulled them up.

STARNER: They say, you're going to rely on it too much, and you're going to decay your natural memory.

SPIEGEL: All the complaints that reporters like me had lobbed at him over the last 20 years.

STARNER: It's going to lower your IQ points.

SPIEGEL: There was the concern that computers fracture attention.

STARNER: Humans are not very good multi-taskers.

SPIEGEL: That forgetting can be important.

STARNER: All right, so this is the other one I get. It's good to forget.

SPIEGEL: That they socially isolate you.

STARNER: The thing is that I found it to be the opposite.

SPIEGEL: Thad had a rebuttal for each one.

So like, from your perspective, there is no downside to this merger?

STARNER: I have not found one. It's like saying, what are the downsides of wearing eyeglasses? Let's think about it for a second. What are the downsides of wearing eyeglasses? When I take it off, I'm blind. I take these things off, I don't see as well. Yeah that's a downside, but if I put it on, I can. And otherwise, I couldn't see. We also have to - I have to wash them. It's a fashion thing. You know, the first person who wears the first eyeglasses is going to look funny to everybody else until people get used to people wearing eyeglasses. What else are the downsides for eyeglasses?

SPIEGEL: If the question is good or creepy, according to Thad, it's all good.

(SOUNDBITE OF MUSIC)

SPIEGEL: But let's pause for a moment and think about that last analogy that Thad used - that computers are like eyeglasses. I actually heard versions of that analogy a lot from the people that I talked to in the tech community.

GREG PRIEST-DORMAN: You know, I wear eyeglasses, you know? I am a modified human. I augment my foot's natural ability to resist the bumps on the ground and the stuff that I may be walking over by wearing shoes.

SPIEGEL: This is Greg Priest-Dorman, another person working to create Google Glass.

PRIEST-DORMAN: I am a technologically enhanced human, as we all are. We're not - very few of us are running around naked in the woods.

(SOUNDBITE OF MUSIC)

SPIEGEL: I think the argument here is that linking computers and humans is fine because there's no real difference between computers and any of the other tools that humans have built and integrated into our lives over the course of our long history. Humans have always built tools, and often when a new one is introduced, there is hand-wringing - a fear that it will change us in some fundamental and bad way.

When the technology of writing started to become more popular, the great philosopher Plato was totally against it. He argued it would mean less face-to-face interaction. You'd be able to get information without looking another human in the eye. And cognitively, it would change us because our ability to remember would fade, basically, the same kind of arguments you hear about computers today. They change our relationships to each other and how we think. But of course, no one today believes that writing has made us worse or less human. So is a computer, particularly a wearable computer, just like the tools that came before - something that initially scares us, but ultimately, won't challenge the core of what it means to be human?

VERNOR VINGE: I think it actually is qualitatively different, yes.

SPIEGEL: This is a math professor turned science-fiction writer, named Vernor Vinge, who's very influential in certain tech circles. And I called him because Vinge spends a lot of time thinking about this technology, and I wanted to know if he thought that computers were just like all of the other tools that came before. He didn't because computers, he thinks, will really, really change us.

VINGE: The analogy I would use is that if you could magically talk to somebody from the year 1800, you could explain our present world to them. And they might not believe you, but you could make them understand what is going on nowadays. On the other hand, if you tried to do the same exercise - explain our present world to a goldfish - you probably wouldn't have very much success.

SPIEGEL: He's saying, making computers part of us, part of our bodies, is going to change our capabilities so much that one day, we will see our current selves as goldfish.

VINGE: Right.

SPIEGEL: Now, when he said this, it didn't make sense to me. I mean, why would this tool, above all the others, cause such a massive change in our species?

VINGE: Oh, because they are approaching the fundamental thing that makes us humans.

SPIEGEL: Computers will change our brains, he believes - fundamentally change our ability to remember and synthesize in a way that transforms how we think.

VINGE: Computers have the possibility of actually undertaking to supplement almost all of our mental function.

SPIEGEL: So it's not just a tool.

VINGE: This is not a faster weaving machine. This is not a faster horse. This is very close to being the essence of us.

SPIEGEL: But Vinge thinks this future species we will one day come to be is actually something to look forward to because he believes that our humanity will be enhanced.

VINGE: What we're talking about is the enlargement of the human experience, not the subordination of it.

SPIEGEL: So that's one way to look at it. But there are others.

ORTH: It's changing us dramatically all the time.

SPIEGEL: That is Maggie Orth again. Maggie worked in wearables for a long time but recently left, in part because she started to feel uncomfortable with the direction that things were going. One of the big goals of the kind of wearable computing that people like Thad are developing now is to integrate man with his computer so seamlessly that the computer essentially becomes invisible to the user. You don't have to find it and pull it out and punch in a password like you do with a phone. It's just there - another invisible voice in your head or image in your eye, quietly telling you where to look and what to remember and giving you all the news that it thinks you need. And that invisibility scares Maggie.

ORTH: Because it's invisible, I would argue that it's more likely to influence you and have an effect on you. You might not feel it. You may never know. It's still doing something, you know? And what it's doing is a product of the people who program it and the product of people who want to sell computers and a product of a million choices that are made by people to manipulate the user. You can look at it as manipulation or pleas. They're not that far apart.

SPIEGEL: So will computers make us better? Will they make us worse? Will they change the core of what it means to be human and turn us into goldfish? Or will we basically keep being humans, fumbling around with our love and our hate and our strength and our weakness, as we always have? It's very hard to tell. Google has actually recently stepped back from Google Glass in part because of concerns from the public about what wearables could do to us. But Thad, one of the people building our future, says he has not only seen it. He's been in the future. And he promises there's nothing there to be afraid of.

So Siri?

SIRI: How may I help you?

SPIEGEL: Do you want to take Lulu's place and co-host with me?

SIRI: Yes. Invisibilia will be back in a minute.

SPIEGEL: Thanks, Siri.

SIRI: I live to serve.