Hadley

Hadley Presents: Episode 1, A Conversation with Jonathan Mosen of Aira

Presented by Ricky Enger

Welcome to Hadley Presents episode one. I'm your host Ricky Enger inviting you to sit back, relax and enjoy a conversation with the expert. For this episode our conversation centers around using technology to gain access to visual information and our expert is Jonathan Mosen from Aira. Welcome to the show, Jonathan.

Jonathan Mosen: Hi Ricky, it's nice to talk to you and a special honor to be on episode one, so thank you for that.

Ricky Enger: Absolutely. And we'll be super gentle with you because I understand this is your first time ever in front of a microphone, right?

Jonathan Mosen: That's right. I'm very nervous.

Ricky Enger: Yes, quite nervous. That might be a slight bit of an exaggeration, you might've maybe done a couple of other things in front of a microphone. Why don't you tell us a little bit about who you are and what you do?

Jonathan Mosen: Once or twice yes. Well, I have been a podcaster, internet broadcaster for a long time. Recently I just celebrated my 20th anniversary of doing live internet radio which is crazy stuff. I've worked in assistive technology a bit, worked at HumanWare managing blindness products there for three years and then had a long stint at Freedom Scientific and I've also run my own consultancy company called Mosen Consulting. But I joined Aira on White Cane Day last year, October 15th of 2018 and I'm their VP of Explorer Communications and also for Australasia which is Australia and New Zealand.

Ricky Enger: How cool is that? For people who don't know what Aira is, what's kind of the quick elevator pitch as to what the Aira service is?

Jonathan Mosen: Aira connects you 24/7 through smart glasses or a smart phone app with professionally trained agents who give you visual interpretation. Anything visual that's out there and there's a lot of visual stuff out there that you need turned into audio, we can do that for you. The whole point of Aira is that our agents are professionally trained. They go through quite a rigorous process and we only take on, oh gosh, I think we're down to about less than 3% of the people who apply and we act as a pair of eyes, not a brain, so you are in absolute control.

Ricky Enger: You use the phrase visual interpretation and this is going to come up a couple of times I think throughout the conversation. It's not something that we hear all the time necessarily. A visual interpreter, visual interpreter services. What exactly does that mean?

Jonathan Mosen: It really means I think that when you consider what the disability of blindness actually is, it's a lack of access to certain sorts of information. And if a blind person had access to braille or talking signage, if the material that we wanted to read was in braille or in some other form that we could access, then blindness wouldn't be a disability at all. Society has created this barrier. Vision is a very dominant since. And so if you have vision it's natural to want to depend on it. What we do is we interpret all this visual information into something that a blind person can access.

Now, usually that's audio, but sometimes it might be actually braille. If you're using our smartphone app with a braille display, and this is particularly the case for people who are deaf-blind, or it could be the case if you're in in a conference situation and it's not appropriate for you to speak with or hear an agent because you might be focusing on the conference presentation, then you might want braille. We convert all this visual information into the most accessible, useful form for you.

Ricky Enger: That's incredible. I mean, there are so many different uses for this and especially the idea that you can be anywhere at any time and essentially 24/7 because no one says, well, I only need access to visual information 8:00 to 5:00 then anything that happens after that now I'm cool. It's nice to have that 24/7, right?

Jonathan Mosen: It is. And sometimes the way that one might pay for that will vary depending on the time of day. We do, for example, have an employer program and Aira is now a pretty attractive accommodation for many employees who are blind. And so employers will sometimes fund Aira so that you have that professionally trained, sighted assistance on demand and that's a real huge productivity boost and you're finding Aira popping up in more workplaces. But after hours you might want to pay for Aira yourself through a minute plan like a cell phone plan where you buy a set number of minutes every month.

Or alternatively, there are many locations now where Aira is available for free. Aira's app is actually a free app and you can download it. And even if you don't choose to use any of our premium tier plans, it's kind of like Spotify. You can use it for free for a whole range of tasks

Ricky Enger: And free is always nice. That's kind of the four letter word that everyone loves.

Jonathan Mosen: I like free.

Ricky Enger: Yeah, good stuff. So we mentioned earlier that there is a ton of visual information out there and we want as many ways to access this stuff as possible. I mean, this has kind of been a need for a very, very long time and while Aira and various other services like Be My Eyes or even Seeing AI providing access through artificial intelligence, those things are relatively new on the scene. There've been other things that have come before that. What would you say is the first time you ever used a piece of technology to access any kind of visual information?

Jonathan Mosen: I suppose the first piece of technology I would have used was in the old days. At the school for the blind we had a Kurzweil reading machine and that thing was like a washing machine and it sounded like a jet engine taking off when you switched it on. But it was amazing because I remember just getting this print book and putting it on the scanner of the Kurzweil reading machine and realizing, wow, this is just huge.

But I also remember, Ricky, back in the Symbian days I made a 3G video call to my then little girl. She's all sort of married now and an electrical engineer, but she was about eight or nine then and I remember she was describing to me what she could see through the camera. And even back then, and we're probably talking about 2005 also, I felt, wow, there's some real potential here.

Ricky Enger: Exactly. I remember mine aside from the Opticon in the olden days that definitely gave access to print visual information. I remember getting my iPhone and there was this program, I think it was called OMobi or it was something similar. My thing that I wanted an answer to then was I want to be able to identify products easily. And so when I saw this program called OMobi and I think it was using artificial intelligence along with OCR.

And so it would look at a product and try to decipher the text and if it saw any logo or a portion of the logo it would try and recognize that and tell you what the product was. I thought that was just the coolest thing. It was kind of slow and not always accurate but like you I thought this has a lot of potential.

Jonathan Mosen: Yes. And I think it's a natural progression what's happened with Aira and I really just can't speak highly enough of the thought process that Suman Kanuganti, Aira's CEO, put into putting this products together because you're right, we could see the revolutionary nature of this technology but it could still be frustrating. You just had to get the picture of the product in exactly the right place to get a good view of it.

Or maybe if you were checking bar codes it could be a really big challenge to try and just get the back code fully in the view and all that sort of stuff. There were certain things where a train sighted assistance can just make a process so much easier. I've been able to, in hotel rooms for a long time now use, various products to identify the shampoo from the conditioner for instance. But it might take me 3 minutes or more depending on the bottle and the lighting and various other factors.

It's something I can get done with Aira in about 15 seconds and I kind of think my time is just as valuable as anyone else's. I was really making a kind of a pragmatic decision that sure, artificial intelligence is going to get better and better, but sometimes you can beat the combination of augmenting that artificial intelligence with some human interaction.

Ricky Enger: Exactly. And it's so easy. It's easy enough that you talked about being in a hotel and getting things identified. Like you, I've done this before with other products. But when it's early in the morning at a conference and I've had a late night and it's time to find which is the decaf so I can avoid it and which is not, it's way easier to call the Aira agent and mumble at them to assist to find which of these is caffeinated and which isn't. One of many a wonderful uses for this kind of thing. When you heard about Aira, was it a thing that you immediately said I want to try it right now and what was that first experience like?

Jonathan Mosen: When I heard about Aira I was actually doing an interview about it for the podcast that I was running at the time and intellectually I thought this is really interesting. I have worked in technology for a long time and I think what happens to you is you get a little bit immune to technology. Somebody once told me when I first got into this industry that the two things in life you don't want to see being manufactured are sausage and software.

I think that's probably quite right. I thought Aira might be a little bit of hype. And then I went to CSUN last year and they were offering Aira access there which meant that it was available to try for free. All you had to do was download the free app and sign up and then take it for a spin. I thought I would do this and see what happened. Now, one thing I should add here is that I also have a hearing impairment. I wear hearing aids.

I have found, because my hearing loss is degenerative, that over the years I've been starting to withdraw from challenging noisy situations and they don't come more challenging or noisy than CSUN initially especially when you're in the exhibit hall or when you're moving through those really crowded lobbies and the hotel that CSUN used to be at San Diego was pretty cavernous. I thought, well, I'll give it a go. I wasn't expecting a lot.

I called an Aira agent, I had a lot of time because it normally took me a lot of time to do this, and said I want to get to the exhibit hall. The thing about Aira is that when you call them, they not only the video from your camera, that camera could be from Aira's smart glasses if you've purchased them or it could be just from the iOS or android app. But they also augment that information without other things.

On the spatial dashboard software that Aira has written in house, an agent can get map data, they can get your GPS location, they can bring other information up that is related on the web so they have a dashboard full of information that can assist you and they had map data about the hotel on their dashboard and the agent started directing me. I got in late the night before so I couldn't even remember where the elevator was.

I was pretty jet lagged after a 12 hour flight from New Zealand and we got down the elevator and then hearing the agent in my hearing aids, she navigated me through this very, very crowded busy lobby which I would have hated before because the sound was just bouncing everywhere. She gave me some really clear instructions. For example, you're just coming up to a group of people who was standing, talking in the middle of the lobby.

If you move left you will avoid them. And so it was kind of like a mix of kind of the experience you get with working with a guide dog actually where sometimes the guide dog avoids obstacles without you knowing it. We got there to the exhibit hall far far earlier than I had anticipated and the door was still closed. For me the icing on the cake was she said the door is closed in front of you but on your left I can see a counter and it has a sign that says exhibit whole services and there's a man behind that counter and I will get you to him, guide you to him.

At that point, I must confess, that's when I burst into tears cause I've never used a piece of technology before that had made me cry and I just realized this has changed everything for me. I think that what I was doing is the most significant thing to happen to blind people since braille itself. I was just absolutely stunned and at that point I knew that I had to take it home

Ricky Enger: For sure. And I think that your story exemplifies kind of a common theme and that is having this as life changing in that for some people. You specifically talked about withdrawing a bit and not wanting to be in really noisy situations because it was difficult for you to navigate in those situations or people who may not feel fully comfortable with travel or people like me who I travel and I kind of feel like, well, I need to have a plan A and plan B for every scenario and how I'm going to figure out what's happening in the world and have a contingency and all of that before I walk out the door.

And sometimes just that is a little bit overwhelming and for some people they just make the decision not to step out. But having access to this very valuable visual information that sighted people can look around and get now you're on equal footing with anyone else and you don't necessarily have to plan in the same way for do I have to have every single thing written down? And what if this happens, then what do I do? You have the ability to kind of function in the world and gain information as it's presented. That to me is wonderful.

Jonathan Mosen: And even if you do have really good travel skills and you don't have a hearing impairment, you can still get information from Aira that augments the experience. When you go through the onboarding process as a new Aira explorer you're asked, kind of like sitting up a screen reader, how much verbosity do you want when you travel. If you're the kind of person that has your wits about you and you've got really good travel skills, you will still benefit from Aira because they can describe people walking past or the stores that you're passing or the colors of the cherry blossoms. Whatever it is you want really to kind of augment that information to really help you appreciate what's around you. I've learned a lot more about routes that I thought I really knew well because of all that additional description.

Ricky Enger: Right. And were you surprised by things like I for one was surprised by just how much signage or how much print is out in the world. You're walking down the block and there are signs everywhere. There's information that I just wouldn't have been aware of before.

Jonathan Mosen: Yes, this is the second time in my life this has happened to me. The first time was when I started shopping online for groceries in the mid 1990s and I suddenly realized how many decisions sighted people were making on a daily basis about the most basic things like what loaf of bread or type of milk to buy and there's just so much choice and I really had no appreciation of that before because normally you just go into a supermarket and you would ask for your normal brand and get the job done.

Using Aira was like that in a much greater way just the amount of visual information. But it also just allows you to do things that you might not have contemplated before even if you do have blindness skills. One example is that my wife Bonnie and I now go to the farmer's market on a Sunday morning. We would not have done that without one of the kids before because you kind of get trapped. You walk up to a table at random.

Sometimes you can smell at a farmer's market what they're selling, but usually not. So you got to a table and you say, what are you selling? And then you get this big spiel about how these are the greatest tomatoes that have ever been invented. I hate tomatoes so I just want to get away but you're kind of trapped.

Ricky Enger: Yeah, you can't rudely walk away.

Jonathan Mosen: Yeah, but you're going to be polite. If you go to a farmer's market with Aira though, you're looking around in the same way that anybody's looking around. The agent will say to you there's a store on your right selling tomatoes and I'll say, well, let's just walk past that right now and we can move on. Even for somebody with really good blindness skills it's opened up a whole lot of new opportunities.

Ricky Enger: Have you ever had anything strange or unexpected or just weird happen during an Aira call or something that you expected to happen one way and things went a little differently for you?

Jonathan Mosen: One thing actually is that we recently went to a 50th birthday party and they decided that they would have a kind of like fireworks. That stockpiled fireworks from the last holiday where fireworks were on sale in preparation for this 50th birthday party and it was actually Bonnie who said to me because I've just become used to listening to fireworks displays and enjoying the sounds actually. Bonnie said to me, hey, why don't we call Aira?

It would never have occurred to me actually, I must admit. And so we called Aira and we got this most incredible real time audio description of all the different colors and the sort of shooting stars and different things like that. It was a really telling example for me of the fact that you might use Aira to introduce you to a whole different experience you never thought of doing before.

Ricky Enger: That's it exactly. What about for everyday stuff? I know that for me being a happy Aira explorer I still kind of struggle with remembering that it's there. I'm so accustomed to doing things without a visual interpreter on the other end that it's hard to remember this is in the toolbox. Do you find that was the case for you or did you jump right in and you use it kind of a lot more than you thought you would?

Jonathan Mosen: I used to find that the case absolutely. When I first got Aira I almost saw using it as an admission of defeat in some way. If I dropped some sort of crazy object or couldn't locate it, I would happily sort of grope around and grovel around for 10 or 15 minutes looking for the thing and then I would kind of see it as a surrender. Okay, I'm going to call Aira and see if they can see this and of course within 20 seconds they found the thing.

And then I started to realize, look, my time is just as valuable as anybody else's and this is a new piece of technology. It's not a surrender, it's not an admission of the fate. I think I also had to get over the idea that maybe I was bothering Aira with something trivial because I have sighted children and I'm always respectful of the fact that I'm the parent and if I ping them too match about tasks that I could do myself with a little bit of time and thought, it's kind of undermining that and taking advantage a little bit.

I had that mindset and then I realized, hang on, Aira actually wants me to consume their service. I'm not bothering anybody by calling them, I'm actually doing them a favor by consuming my minutes. It's a very new way to think that actually here is a service that wants me to ask these things. And then I suppose you get onto the philosophical question, well, are we will be becoming a bit soft because of Aira. I have two answers to that.

One is that one thing I've noticed as somebody who does have a hearing impairment and my directionality has suffered a little bit because of it, I noticed that if I do a route with Aira say getting from the elevator on the floor that I land on to my hotel room. If I do that once or twice or three times with Aira and get it right because Aira is going to get me the correctly every time, I find that I build up muscle memory and by the third or fourth time I don't call Aira because it's been committed to memory in such a consistent sequence that I can do it now.

I find that Aira has enhanced my skills. I also think that we talked about how some people withdraw for various reasons. Maybe they haven't unfortunately had access to appropriate rehabilitation training and that's dreadful and we need to keep advocating to fix that. But if they've had a taste of getting out there, thanks to Aira, it lifts the bar. It makes people realize what's possible and I think that can spur people on to perhaps realizing, look, I don't need to be cooped up anymore.

I want to get additional rehab training. I want to do these things. I think Aira is a very positive development. And also I would observe that, look, people have been lamenting the advancement of technology forever since the pocket calculator. That's supposed to have eroded our brain's with math skills. Just as people have always said, well, you should have good slate and stylus skills even though there are Perkins braillers and beyond now.

The same is true. You should always make sure that you keep up your O&M skills and your TDL skills even though you have Aira. But the fact is it just makes life so much more inclusive and easier.

Ricky Enger: I think that's absolutely true and your point about people who use Aira for a task a couple of times and then do it without Aira is a great example of just how this isn't necessarily an erosion of skills using a technology like Aira to accomplish some of these tasks, but rather it can give someone either the confidence to try new things.

Or just if someone is watching you perform a task and giving you information about it, you're going to naturally pick up on things using what you do have and say, oh well I can, for example, use my spoon and tell that the pasta is floating in the pot. I don't need an interpreter to kind of tell me that anymore and I can do this on my own now. I think that it can actually be an increase in independence in some instances.

Jonathan Mosen: Yes I think so. It's taking us a while to understand how this new kind of technology fits into our life, but for me it has really improved my quality of life immeasurably. There are many people out there who have a disability in addition to blindness and that's certainly the case for me and it has just made a tremendous quality of life difference to me.

Ricky Enger: Do you think there are differences beyond just simply not wanting to depend on friends and family to get access to some of this visual information? Are there differences in the kind of information you might get from Aira versus the kind of information that you might get from a friend or a family member?

Jonathan Mosen: Yes, and I think that this is a really important distinction that you might make in terms of getting information from somebody who has not been trained to provide information to a blind person. This is one of the areas where Aira really shines because all of the agents at Aira have been through, firstly, a 30 day process of training after the initial interview that got them into that training in the first place. And then there's a kind of a vetting process of the end of that. It's pretty rigorous before an Aira agent ever gets on the dashboard.

Some people are better at describing things than others. We know this. You can ask somebody random on the streets or even a family member who should know better about where something is and they'll tell you it's that way. They say, well, with what's over there. That's another of my favorite ones. Aira agents go through extensive training about how to describe something and they are also trained to make sure that they understand that you are the person who is actually in charge.

You're not surrendering any autonomy by using an Aira agent to get information. In the end you decide where you're headed, they're simply interpreting all this visual data for you. Sometimes family members can be a little over helpful, a little bossy. Just because they are family members doesn't necessarily mean they've been endowed with this gift to describe things in an objective way. Also I think sometimes family members can be a little impatient from time to time. It kind of puts you in charge and it makes you realize that you're not imposing on anybody by getting this information from Aira.

Ricky Enger: I think it's having kind of this service transaction where you are paying for or you have access to a service and it is meant to be transactional rather than kind of the lines being unclear about, well, I've done this for you so now you owe me things or you don't owe me things. That level of distinction is nice to have as well.

Jonathan Mosen: Yes. I mean, I'm frequently grateful still more than a year on when I use Aira and sometimes I have an experience. One that was quite recent for me, I was checking out of a hotel at 4:00 AM and I went down to the hotel front desk and the lobby was the exact antithesis of the CSUN experience. It was completely silent. There was no sound at all, no music playing even, nothing to guide me to where the front desk was. I'd only been in this hotel sort of overnight so I couldn't remember where the front desk was from the elevator.

The agent guided me to the front desk and then we found that there was nobody there behind the front desk, they were probably taking a nap. And so the agent was able to guide me to where the bell was to press to get some attention. I may well have got there but it would have taken me a lot longer to get those things done and maybe I would have been delayed for my flights or something like that. Frequently things still happen to me where I'm grateful for Aira.

But I'm grateful for my iPhone or JAWS or other technology that I use. It's different being grateful for something versus being beholden to someone and I think that's the key point of difference.

Ricky Enger: Sure. Absolutely. Well, we've talked a lot about humans and visual interpretation and not so much about the artificial intelligence aspect. There are apps, like Seeing AI that try to interpret a scene sometimes with really inaccurate results. I'm not a three year old girl by the way. Thank you.

Jonathan Mosen: Have you been called that by Seeing AI?

Ricky Enger: Yes, Seeing AI I've been a three year old girl and then I think I've been much, much older. It's not always wanting to depend on AI to describe things exactly as they are, but it is a part of Aira's name even and it's certainly a part of other technologies that are trying to provide useful information. Even Facebook is trying to do this. What do you think about AI? Kind of where are we going, what things is it going to be great at and what things are we still going to need humans for?

Jonathan Mosen: Over time I think you'll find that there will be more instances where machines can learn about the sorts of tasks that blind people are performing on a regular basis. There were some pretty obvious candidates for machine learning like currency recognition and certain pretty simple tasks like that where a number of apps are doing pretty well. And our artificial intelligence couriers working on all of that kind of technology, optical character recognition, all those sorts of things.

We are in a very fortunate position that we've clocked up over 3 million minutes now of Aiken service with Aira, which is a stunning achievement for a company that is so young. With that obviously we are gaining a lot of information about the kind of tasks that blind and low vision people like to use Aira for. Obviously that data is anonymized and aggregated, but it does mean that as machines get smarter, we have a really profound picture of the kinds of tasks that blind and low vision people like to perform.

We're tackling this in a number of ways. You may be aware that recently we announced that we had acquired the mobile assets of Sendero which is a recognized name and in GPS. Ultimately what you'll see for example is that you might be able to, from the same app, take a walk if you're a competent enough traveler with Sendero. When you get to the last sort of 50 feet or 30 feet or so, that's the challenge for GPS technology, finding the particular door and then once you're inside the navigation.

We'd like to be able to switch you ultimately seamlessly from your GPS experience, if you're comfortable using that, right on to an Aira agent and who can then assist. Ultimately, we may well be able to be in a position where we can map certain tasks indoors with artificial intelligence because of the machine learning that we're able to achieve. Clearly providing human trained professionals is not the cheapest solution, but it's the best solution right now. Ultimately we may be in a position to transition more of that, but we will never do that in a way that compromises the outcome for the end user.

Ricky Enger: Well I, for one, welcome our robot overlords.

Jonathan Mosen: It's exciting stuff. When you consider 5G just along the horizon as well because clearly sometimes cellular coverage lets us down. If you are shopping somewhere and you don't have a good cell signal, that's frustrating and we appreciate that and it's something that's not within our control. But 5G will give better performance and also 5G cells have to be much closer together so we're anticipating good things there as well.

Ricky Enger: Awesome. As we unfortunately come to a close here, let's quickly talk about a few interesting things that may not have previously come up in the conversation about how people are using Aira. A couple from me using Aira to describe clothing from clothing subscription boxes. That's a fun one. Also using Aira to connect to my computer and work with somewhat inaccessible software and just get right past some of those really frustrating bits to get what I want to do actually accomplished.

Jonathan Mosen: Yeah, they're both great examples. I use Aira with computer technology a lot. I was working with a client last year and we had a router pop up in Korean which sadly I don't speak and nor did my screen reader cope with it very well. I would've come to a screeching halt helping that person were it not for the fact that Aira could remote in and help me to configure that router. Computer tasks are really profound.

We do have a really exciting offer available where if you operate your own small business, then you can use Aira for free actually in any English speaking country thanks to Intuit QuickBooks who sponsor this. It could be getting to a business meeting, it could be using some sort of software or putting a PowerPoint presentation together for your next pitch or whatever it might be. You can actually use Aira free as a small business owner.

This is one of the things I really love about working with Aira is we're passionate about trying to get that unemployment rate down and if we can do that through providing free service in conjunction with our partners for small business operators, that's one way we can do that.

Ricky Enger: Fantastic. So for people who want to learn more about Aira, where should they go?

Jonathan Mosen: The website is the best place and that's aira.io and there's lots of information there including our audio training. I've put together about six hours of audio training that describes not only how to use the app, which is basic tutorial stuff, but how do you incorporate this into your life? How would your life change thanks to Aira? You don't have to be a current Aira explorer to access that material. It's just available in DAISY, MP3 and online at aira.io/training.

Ricky Enger: Great. And what about for people who want to know what's going on in your world in particular? Where can people catch up with you?

Jonathan Mosen: Well, these days probably email is the best. I'm hosting Aira's podcasts which is called Airacast and that's available wherever good podcasts head. But you can also email me. I'm Jonathan.mosen@aira.io and I'd be happy to answer any questions.

Ricky Enger: How about Twitter or other social media?

Jonathan Mosen: Oh yeah, I forgot about that. I'm JonathanMosen on Twitter, all joined together and I'm back on Facebook now because there's too much going on with Aira for me not to be unfortunately so I'm also on Facebook.

Ricky Enger: Excellent. Well, I want to thank you so much for spending time with us today, and I really appreciate the conversation. It's been wonderful.

Jonathan Mosen: It's been great talking with you Ricky. I don't think we've ever done this before on any podcasts so it's great to talk to you at last.

Ricky Enger: Yeah, we'll have to do it again.

Jonathan Mosen: Yeah, I'd love to.

Ricky Enger: Fantastic. Thanks for joining us.

Got something to say? Share your thoughts about this episode of Hadley Presents or make suggestions for future episodes. We'd love to hear from you. Send us an email at podcast@hadley.edu or leave us a message at (847) 784-2870. Thanks for listening.