BI Radio

Episode 28 – (BIR 28, Usability)

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Station ID: This is BI Radio

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Montage:

- Three areas that I can measure during a usability test: effectiveness, efficiency and satisfaction.
- We are never testing people. What we are testing is the software.
- The interfaces are definitely an avenue to get more people excited about the technology that we provide.
- The more people that are conscious about it, the better not just for me as a usability practitioner, but in its own little way it makes the world a better place.

(00:35)

Ken Seeley: Hi there, and welcome to BI Radio. I'm Ken Seeley. On the show today, we get a feel for usability. Where did it come from? Where will it go? The what, why and how of design, testing and interfaces all in a single, easy-to-use podcast.
Our Technology Soup panel discusses the development of hardware and software, the influence of digital natives and what's waiting for us on the road ahead.
Our producer, Derek Schraner, speaks with testing specialists, Steve Macko and Gabrielle Nagy.
But first, an interview with Jeff MacArthur of tech news videocast, commandN, and co-founder of MGI Media Communications.

(01:20)

Derek Schraner: Hello and welcome. My name is Derek Schraner. In this segment I'll be discussing usability with Jeff MacArthur. Along with Amber MacArthur, Jeff is the co-founder of MGI Media Communications Inc., specializing in usability, social media, video and web production.
On the line from Halifax in Nova Scotia, Canada, Jeff, thanks for joining me.

Jeff MacArthur: Thanks very much for having me, Derek.

Derek Schraner: From a high-level perspective in fairly simple terms, can you give us an idea: What is usability?

Jeff MacArthur: I like to use a pretty broad definition of usability, and I think it's appropriate because there's a lot of different facets related to it. So the quickest definition is kind of ease of use. But basically it's the study of the ease with which people can use devices or other manmade objects. It usually includes things like learnability and efficiency, memorability and general satisfaction with how it is to use. So you can apply that to everything from a website to a car to a cookbook.

Derek Schraner: Why does usability matter and to whom does it matter?

Jeff MacArthur: I think the important thing is that it matters most to users really; so to your audience or to your customers and anyone that's in that sort of relationship where they have an audience or customers or whatnot is likely trying to or would be well advised to try to make their experience as pleasant as possible. So it ends up mattering to everyone, but the end goal is that you want to keep your users and whatever role they're assuming, want to keep them involved in the process they're in and able to proceed through it without frustration, basically.

Derek Schraner: Are you familiar with the origins of usability? Could you give us some brief historical overview of it?

Jeff MacArthur: Yes. So there's a lot of different terms thrown around around usability, and it's why I like to use it as sort of a broad term. Most commonly the origin is cited as coming from human factors and ergonomics, which had its roots in psychology. And a lot of people look at in World War II weapons and electronics development and things like that are really the early examples of when that became important. And then you can follow that trajectory through the development of computers and mobile devices and in the age which we're in now where it applies to just about everything.
So a lot of people see the origin as really being in the Second World War when we started to use a lot more electronics, and obviously in that sort of theatre it's awfully important that people understand the tools and don't misuse them when that could lead to, you know, not frustration with the process, but death. But that's the commonly cited origin for it, and that's evolved over time up until now as we create new devices and things to interact with.

Derek Schraner: We're used to changing ourselves for the sake of these devices when in fact do you think we should be changing the devices to suit us?

Jeff MacArthur: Absolutely, and I think that's why the touch-screen has taken off really. A keyboard and a mouse, they certainly serve the purpose they were created for well enough, but it's definitely a step removed from what our natural interaction would be, and our natural interaction is really through touch. So I remember years ago watching Minority Report when it came out and how they did their sort of virtual screens and manipulated the objects on that by swiping their hands across the air and all this stuff. And that to me and to a lot of people seems more natural because for most of our history we haven't had keyboards and mice. We've had pieces of paper. We've had these tools

that we'd move around with our hands without an intervening control like there is with the modern computer.

Derek Schraner: We've been looking at things, usability, from a consumer level perspective largely. Is it, and if so, how is it relevant to IT or to business?

Jeff MacArthur: It's very relevant in a lot of different ways. So if you think about whether it's IT or general businesses, you know, on the IT side first and foremost you build something and you want it to be used. People won't use things that are really unpleasant to use unless they have to, and there's usually so many options in the IT world for you. There's a dozen different choices for any given type app that'll all work halfway decent. So it's an easy way to drive away customers. Bad usability is a real disincentive to use. But beyond that, we want, if you look at it in an internal way instead of looking facing out towards the customer, you want to build your tools for your company so that people are very productive on them. So that means looking at efficiency and these core usability concerns like that. It also leads to decreased training and support costs.
So you can look at it facing outwards from the business side, and your goal is to have happy customers and that likely leads to a paying customer who provides some sort of value. But you have so much less control over how a customer uses something than you do somebody internally.
You can sort of whip people up internally, to say sorry you have to use this. We'll try to make it better. But if you try to do that outwardly facing on the web or with some mobile devices or whatever else, people will just walk away. So it's really an essential consideration and one that's only recently being I think really understood. Like it was a very realistic situation and still is in many situations for usability to only be an outward facing thing because anyone inside it's like well, too bad. You're stuck with using this, so learn it. It may have a terrible learning curve and things may not make sense, it may not be intuitive, but we're paying you to do this. You can't treat a customer like that.

Derek Schraner: Jeff, I know you're busy, but I wanted to thank you so much for making the time to speak with me today.

Jeff MacArthur: Really happy to do it, Derek. It's something that's very close to my heart and that I feel strongly about. And the more people that are conscious about it, the better, not just for me as a usability practitioner, but really in its own little way it makes the world a better place.

Derek Schraner: We've been speaking with Jeff MacArthur of MGI Media Communications. Visit online at mgimedia.ca.
I'm Derek Schraner. Thanks for listening. Take care.

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Station ID: Interviews, insights and opinions on performance management. You're
listening to BI Radio.

(10:20)

Derek Schraner: I'm Derek Schraner, the Producer of BI Radio, and today we're
speaking with Steve Macko, user research manager, and Gabrielle Nagy, user researcher
in charge of running usability tests.

Gabrielle Nagy: Thank you.

Steve Macko: Yes, thank you for having us.

Derek Schraner: Today we're talking a bit about usability, specifically testing. Can
either of you tell me what is usability testing? Is it just finding bugs? What is it?

Gabrielle Nagy: Usability basically refers how well users can learn and use product to
achieve their goals and also how satisfied they are with that process.

Steve Macko: And the definition that I like as a user research manager, I like the ISO
definition that talks about effectiveness, efficiency and satisfaction because those are
three areas that I can measure during a usability test, get data on and go back to the
development teams and it gives me data and evidence to prove that we need to change
something.

Gabrielle Nagy: And because we set metrics at the beginning of testing, we are able to
conclude easily at the end. It's not up to me to decide if something failed or passed
because I set the metric at the beginning. The data will show the result.

Derek Schraner: Are there different varieties of usability? I mean usability in testing
and what are the varieties?

Steve Macko: Right now there's three core activities, usability evaluation types that
we're doing. One of them is user testing, which is basically you get a prototype of a
product, you put it in front of a user, you ask them to do some tasks with it. They actually
get their hands on it, and they do these tasks. And then you study their performance – can
they do it or not – and then their satisfaction. So that's a user test.
There's also a usability walk-through where it's typically, it could be a demo of a
prototype or a PowerPoint presentation that the usability specialist walks the customer
through. So it's kind of like a demo. I walk them through it, I ask them questions at key
points throughout and again at the end, and I ask them higher-level questions, because

they're not actually getting their hands on it, is how important is what I've just shown you? What's the value in what I've just shown you? What do you think of the workflow? This is typically done a lot earlier in this stage. A user test can be a little bit later when you already have the idea more fleshed out. But very early on you might want to just know, like am I building something of value? Is there any value that I didn't think of that if I put it in front of a customer they'll tell me about how important it is? Things like that. The last one is user needs assessment where typically you could do a job shadowing or it's mainly a session for an hour or so where you talk to a customer and you kind of see what they're doing currently, and then you try and get from them what they wish they could do. And they show you, like can you build a report for me now? And you watch them do it. And they say gee, I wish I could quickly put a logo on the top. Bingo, there's one user need that we didn't know about. And then it gets interesting when I do this with eight different customers and they all say the same thing. So we can uncover user needs, which we would call the development enhancement requests, which later get into the backlog and then they'll find their way to the next product.

Derek Schraner: Who are these customers? Where are they coming from? How do you select them? Is that important or do you just pick any people off the street?

Steve Macko: You only need to test eight for a couple of reasons. One is back in the 90s there were some studies done that, with usability, if there's a problem, it comes up pretty quick. I don't need to do a statistical study with sample sizes of 100 users to find out that there's a problem. A lot of times, if I test three people, you know, the first three in a session and none of them can do it, we know we've got a problem, which works out really well because if we had to do studies with 100 people every time, we'd never finish. It would take us two, three months to do each study. We're doing these every six days. We're also following an agile development process here where every two weeks they're churning out and producing working code. So we need to get right in there and fast.

Gabrielle Nagy: I just want to add to this because I think what's important in this is the study that you mentioned found out that with six people, 80 per cent of the most severe usability issues can be identified. So that's the reason why we are going with eight, six or more, six or eight because we get the 80 per cent of the largest issues. Yet we don't slow down the development. So it's kind of a good balance to go with that many people.
But what is interesting in usability testing is that it's very powerful. Like usability testing is a powerful tool because the designers who design the products are very smart and intelligent people and they do their best. Yet in the usability testing sessions we find issues. Certain aspects don't work the way how we expected it.
If you bring somebody into the lab who designed a product and sit there behind a one-way mirror and watches how people struggle with an aspect of the software that he or she designed, it is so convincing. We don't need to write a long report to explain this part, this segment is not developed well, not designed well, it doesn't work well because people can't do it. If you just sit there for two minutes or you watch our video recordings and you see people unable to do something, it's enough for you to be able to move on and say yes, they are right, we have to redo, to design this.

Lately we run usability test sessions over the Internet because there are differences between cultures, and maybe something that is easy for a North American can be challenging for people who are from the other side of the world. And so we get those kind of data as well, and we are very happy to do that as well, even though it's a bit different.

Steve Macko: Where customers are really valuable is with user needs and enhancements because our employees are not actual users, so they don't know what their needs are, and if this was rolled out at their company and they're actually using it on a daily basis. So you can't do user needs with our own people. You have to use customers for that. But the good news is we can do it remotely. You don't have to go onto their site to job shadow. I can do it over the Internet. I don't get to see what their cubicle looks like and what sticky notes they have on their walls and what cheat sheets they have, but I can ask them about that. They can tell me about it.

Gabrielle Nagy: I just want to correct, we are never testing people. What we are testing is the software. We are testing it with the user. So it's not about testing them, how smart they are. It's about testing how bad or good the design is. So it's very important. And we always start this at the beginning of the session, so people understand that the design will pass or fail. They won't pass or fail as a person in the test.

Derek Schraner: So that kind of hits at the heart of usability. Usability is about the product being evaluated, not the person.

Gabrielle Nagy: Yes. If I'm a customer and I can see that somebody will listen to me and somebody will make changes to future products that will come out the door in two, three years, and I might buy that. It will be much better because I had something to say. And I said it and they listened. Then I think…

Steve Macko: That's a good point is confidence because our customers can feel confident in us that we are innovating, that we are listening to them, that we are creating products for them because of this function.

Gabrielle Nagy: And they can be sure that if we find high usability issues, then it has to be fixed. It will be in the report, and people will be sad that there is an issue.

Derek Schraner: So we've learned a bit about what usability is, why it's important to everyone concerned, and how people can get involved if they're interested.
That's great. Thanks for joining us. Steve Macko, Gabrielle Nagy, thank you for joining us.

Gabrielle Nagy: Thank you.

Steve Macko: Well, thank you for having us.

(18:50)

(19:11)

Station ID: Insights on performance management. From the people who shape the industry.

(19:30)

Don Campbell: Hi, I'm Don Campbell, Chief Technology Officer.

Stephan Jou: I'm Stephan Jou, Technical Architect.

Jennifer Rosenberg: I'm Jennifer Rosenberg, Lead for Product Experience.

Meagan Hanes: And I'm Meagan Hanes, New Media Engineer.

Don Campbell: So we are always using our products and trying to deal with the fact that they want us to interact in a certain way and trying to get us to understand how to use the features of the products, et cetera. The interfaces of these products are an important deal in their usability, in the fact that we can get their message across. So is there a difference between the user interface and its usability? Can you separate those two, and how important are they?

Stephan Jou: In my mind the interface is a little bit closer to the technology, so we can talk about things like Ajax and multi-touch and so on. Whereas usability is really a more human facing metric, right? How usable is this actual experience, which is made up of a combination of technologies, put together in a way to complete a specific task.

Jennifer Rosenberg: Yes, and whether or not you're satisfied as a user by walking through and using, you know, using a product or using a device or something, what your level of satisfaction is, whether the overall experience is pleasant, whether you can actually satisfy the needs of doing your task or whatever it is you'd like to do or like to achieve by using.

Don Campbell: Is it fair to say that a singular interface can work for all kinds of tasks, for all kinds of users with all kinds of experience levels, or are we really migrating towards a place where the interface changes based on who we are and what we want to accomplish?

Stephan Jou: Yes, context is so important. What you're trying to do, what your end goal is, who you are, what sort of skill set and experience you bring to the table when you go to perform your task. Those are all things that we're finding really make or break how usable an interface really is. It's becoming increasingly important. We have all this great technology in many products. And some of them are really sophisticated and super powerful, but it's of no use to anyone if you can't access that technology, if you can't make it give you the right answer, if you can't tell when it's giving you the wrong answer. So with that in mind, I think usability really is something that we are looking more at in that context specific manner.

Jennifer Rosenberg: Yes, and we've done studies in around researching personas and the types of people that use the products, and the level of capabilities that they would need, you know, to have present for them in an application or in a product. And what are the types of things users would expect to be met with in the product, and the types of reports or however we want to consume the information can vary greatly.

Stephan Jou: Yes, that's a good point. And the importance of that has really evolved in the last few years, right? I mean we're raising a generation of people that grew up with the ease of use of Web 2.0, have a certain expectation on things like graphics and visual design. They grew up with Hollywood graphics, and they've seen movies like Minority Report. And then…

Jennifer Rosenberg: Then there's us.

Stephan Jou: Then there's us guys and girls who maybe spent a little bit more time earlier on with computers, and maybe we were trained that computer interfaces are a little bit trickier because it was always more about what was capable on the CPU and the hardware that we had at the time. But now that is a shrinking population, right? So more and more of the young generation are moving and these digital natives, who are much more familiar, have higher expectations in terms of usability.

Jennifer Rosenberg: Yes, I mean, you know, obviously performance is one of their top priorities because it's instant gratification. They want data, they want information served up quickly to them. But also just observing when we test digital natives, it's very interesting how they do use products because they definitely test the limits to the product, and they're more vocal than perhaps I would be if I was testing. Whereas I may say oh, it's not the product, it's me, they'll say no, it's the product, and this is really how you should do it. This is how I would like to interact with it and throw a video in here, and if I could just do these three steps I'd be happy. And they're very intriguing to watch because they're definitely far more vocal than what we've seen in the past. And they help us shape the direction.

Don Campbell: So Meagan, as a digital native…

Meagan Hanes: Yes.

Don Campbell: … can the experience of the browser really give you enough flash and sizzle and excitement in and make a difference in the usability of a product, or is it too limiting? Do we have to follow standards, and that's the real value of having all our applications delivered through a browser environment? What do you think?

Meagan Hanes: Well there's always a certain advantage to following standards, and as we keep going on, as more digital natives come into the working world, it's going to kind of be assumed that data is easy to move around and we're not used to all these proprietary locks and formats. So I think that kind of goes in hand with the delivery over and through the browser in that if we can see it in the browser, it's pretty much like we can export it; it's our data, it's our stuff. So that's a bit different from the previous generation of computer users, I think.

Don Campbell: Is the next big trend for usability going to be in the hardware side? You know, we went through a time where we were limited to 8-bit graphics or even no graphics, if we go back far enough, and we've gotten to the point now where I think the graphics adapters are fast enough, and we can do three-dimensional stuff, and we can share video and we can do all of that. So is there a breakthrough yet to be had in usability from a hardware side, or is it now all in the software?

Stephan Jou: It's certainly an enabler, right? I don't believe we fully tapped into all the possibilities of 3D and multi-touch and some of the graphical competition that we have. Look at all the projects like, you know, bump desktop and some of the more sensory feedback mechanisms that people are exploring, and often things that we started, with the iPhone, and that's really raised the bar in what we expect from even cell phone devices and other mobile devices, like tablets as well. So there's almost a back-and-forth relationship I think between hardware and software. There's some hardware innovation then there's software that's required to take advantage of it. And there's always a bit of a runway there.
Even look at things, now this might be a more liberal definition of hardware, but look at more infrastructural things like wireless, you know, constantly being connected, having netbooks that now have eight to 10 hours of battery life so you don't have to be around a power socket all the time. Does that change the way you use your computer and use your applications? You bet.

Jennifer Rosenberg: Yes, it does.

Stephan Jou: Right? And that affects the usability and it affects the workloads that we'd be looking at. So yes, I think there's still lots of room for innovation that we can do there.

Don Campbell: And even new hardware controllers as opposed to the traditional, you know, mouse kind of input. You know, look at what Guitar Hero has done and those kinds of interfaces.

Stephan Jou: I would love to use a guitar to control my workflow.

Meagan Hanes: It would make meetings funner.

Don Campbell: So I think it's clear that we want to expand our user community. We want more people to get access to the data that we provide and use the tools, and use them in an effective way, and the interfaces are definitely an avenue to get more people excited about what we produce and get more people to take advantage of the technology that we provide. They'll continue to be an area of concentration for R&D teams and certainly be something that's on the list for people to look at when they're purchasing technology.
So thanks very much, folks, and we'll talk to you again soon.

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Ken Seeley: Well, that's a wrap. I'd like to thank our guests today. From MGI Media Communications and commandN, Jeff MacArthur. From IBM, Steve Macko and Gabrielle Nagy. And our Technology Soup panel of Don Campbell, Stephan Jou, Meagan Hanes and Jennifer Rosenberg-Baker. Thanks as well to our head producer, composer and audio engineer, Derek Schraner.
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I thank you for listening. I'm Ken Seeley. And we'll see you again in about six weeks.

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