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**David Lightbown**

User Experience Director at Ubisoft Montreal

David has been working professionally in computer graphics for over 20 years. The majority of his career has been focused on

helping game developers find ways to be more productive. David is an Autodesk Master Award recipient, participates in mentoring programs for game developers, and recently published a book: »Designing the User Experience of Game Development Tools«. David currently holds the position of User Experience Director for the Technology Group at Ubisoft Montreal.

**Making Games** When we think of »user experience« we usually think of adjustments for the player. But your role is a much more internal one. Can you describe what exactly your job is about?

**David Lightbown** People usually don't hear a lot about my role as User Experience Director; the job is still quite new, and my position probably only works in a company like Ubisoft that doesn't hesitate to break new grounds when it comes to making game productions more productive. Previously, I worked as a Technical Director for 12 years, and I've been a part of the games industry for about 15 years, and at some point I had this idea to apply the user experience design which you see at other companies like consumer electronics from Apple in a productivity sense on game development. I started reading all sorts of books about user experience and put together a presentation which eventually led to my job at Ubisoft. I came here, presented those slides and explained how my idea could increase productivity. The whole idea was eventually applied to »Rainbow Six: Siege« for which an internal UX team was built. The game features destructible environment, so the player can never count on that wall next to them still being there five minutes later. That's cool, but also complicated from a game development point of view. So we had to make sure to use tools that everybody on the team knew how to use, not just super specialized people. So the UX team took the ideas and techniques that I had put into place and built the required tools for a breakable environment. At the end of the project, there were a lot of team members who thought that due to the complexity of the environment it would have been hard to make the game without these tools.

” *Once I'm finished with my job, I move on to the next team and do the same thing all over again.*

**Making Games** Can you tell us a specific example of the effects your work and your approach had?

**David Lightbown** There are different ways to measure improvement. On the one hand, we get lots of feedback simply by talking to people about how they think our UX work helps them to be more productive. In order to optimize the tools, you must understand people's cognitive and visible limitations, and then we can see that they can feel the difference it makes. Part of what I do in my workshop with teams and studios is to get them to understand in a very short amount of time what their



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multiplayer-shooter-rainbow-six-siege-was-ubisofts-first-project-where-an-internal-ux-team-was-used-to-optimize-the-required-tools\_11277.jpg)

*The multiplayer shooter Rainbow Six: Siege was Ubisoft's first project where an internal UX team was used to optimize the required tools.*

cognitive limitations are. On the other hand, some of our tools can measure how much time people spend with things, so we can in fact measure the difference User Experience makes.

**Making Games** How do the teams react when you join them to improve their productivity? Are they sometimes afraid you might destroy their project?

**David Lightbown** I'm fortunate to have worked in the industry for 15 years. So when I sit down with an artist and he tells me he has to go into Perforce to get a Zbrush file and things like that, I know exactly what he's talking about. So I've been around long enough to understand what they are saying, which is useful and something the teams appreciate. But as a consultant, which is my main role, I'm not tied to one team necessarily; unlike the Technology Group which services all teams worldwide. So I have an external view on people and productions, and I keep telling everyone in our UX department how important it is to go sit with people and watch them work because people do things without even realizing it, and you can find lots of ways to improve their workflow they may not have thought of. Once I'm finished, I move on to the next team and do the same thing all over again.

” *Fast iteration times and efficient tools and pipelines are key to delivering top-quality games.*

**Making Games** How does your work look like when you sit down with an artist? What kind of advice do you give them?

**David Lightbown** As I mentioned before I think the most important thing really is to sit down with them and to watch closely how they use their tools. There is a story about a Toyota executive who went to the US and spent a month driving around in one of their caravans to really get a first-person sense of what driving there feels like. And I think the CEO of Pepsi once said that he went into a grocery store to see how their products were presented on the shelves because that's how the customers interact



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fun-of-the-mario-games-in-this-example-super-mario-3d-world-is-to-find-the-way-to-the-flag-at-the-end-of-the-level-if-the-game-was-created-effectively-mario-would-be-placed-directly-next-to-the-flag\_11280.jpg)

*The fun of the Mario games – in this example »Super Mario 3D World« – is to find the way to the flag at the end of the level. If the game was created effectively, Mario would be placed directly next to the flag.*

with the product. Very few people who create the products really actually see how people use the products, but that is key for two different reasons: For one, it gives you a sense of what needs to be improved, and in our case how we can make a tool better for the specific goal those people are trying to achieve, so that they can think more about their goals and not so much about how to get there. Our task as the UX team is to understand what people are trying to deliver and then to build a tool that helps them reach that goal. The other reason is that there are also certain functions that we spend a lot of time developing because they seem important to us. But when we then watch people how they use a tool, we sometimes realize that we should have shifted our energy somewhere else instead.

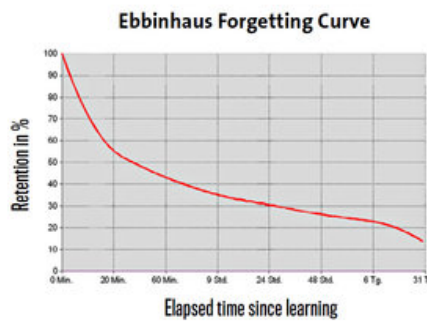
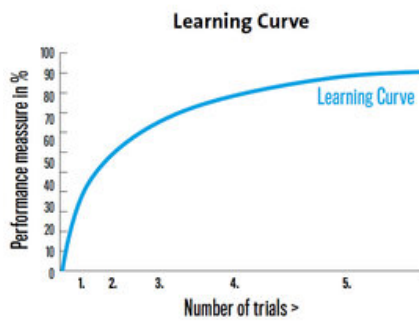
**Making Games** How long do you typically stay with a team?

**David Lightbown** That varies a lot. It could be anywhere from a few weeks to a few months.

**Making Games** Can you give an example of how a tool for Rainbow Six: Siege looked like and in what way it improved?

**David Lightbown** My job for this project was mainly to do a workshop on User Experience with the team and to help them build an internal UX team. I wasn't involved in the actual modification of the tools, it was more the techniques that I put into place. But as I mentioned the most important modification was definitely to make the tools accessible for everybody, so that the destructibility of the levels could be implemented as it now happens in the game. On top, I think it also helped that the team was able to quickly test content and then improve or remove it, simply because it's a lot easier if the tools are easy to learn. Fast iteration times and efficient tools and pipelines are key to delivering top-quality games.

**Making Games** When you say that the tools should be accessible to basically everybody, you mean that people should be able



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concept-of-the-learning-curve-left-is-widely-known-and-shows-that-when-learning-something-new-its-especially-hard-at-the-beginning-to-memorize-it-but-there-is-also-such-a-thing-as-a-forgetting-curve-right-which-shows-how-you-forget-things-over-time-when-you-dont-use-them\_11278.jpg)

*The concept of the learning curve (left) is widely known and shows that when learning something new it's especially hard at the beginning to memorize it. But there is also such a thing as a forgetting curve (right) which shows how you forget things over time when you don't use them.*

to use them even without any programming skills or a similar background?

**David Lightbown** Well, games are made with technology, so of course technology has to play a role in there. However, technology has limitations and as programmers and developers we understand how a computer works, but we also have to understand how the brain works since the brain works like a computer. In the same way that we understand how a program for PlayStation or Xbox works, we should also understand how a program for the brain works. So understanding our physical and cognitive limitations helps us make better tools.

” *The human brain works like a computer.*

**Making Games** Do you also look at external tools like Unity or Unreal Engine to see how they simplify tools?

**David Lightbown** There is a concept that some of you might probably have heard of which is called the learning curve, which says that you learn something, understand it better and better and eventually become an expert. But there is also such a thing as a forgetting curve: over time you forget things. So the more obscure the user interface of your tool is, the easier it is to forget how certain things work, especially if they are very specific for that tool. By observing other tools in the industry and by seeing that consistent patterns are used across these tools, of course, they're a good base for us to build on. When people then open the tool, it feels intuitive for them – although »intuitiveness« actually doesn't really exist. What people really mean is that it feels familiar and that they have seen it before. So yes, we definitely look at other tools and programs for inspiration, and anybody who works in user experience design for tools is inspired by these patterns and guidelines. We just try to take them further and to make them even more efficient.

**Making Games** How common is this kind of approach in the games industry?

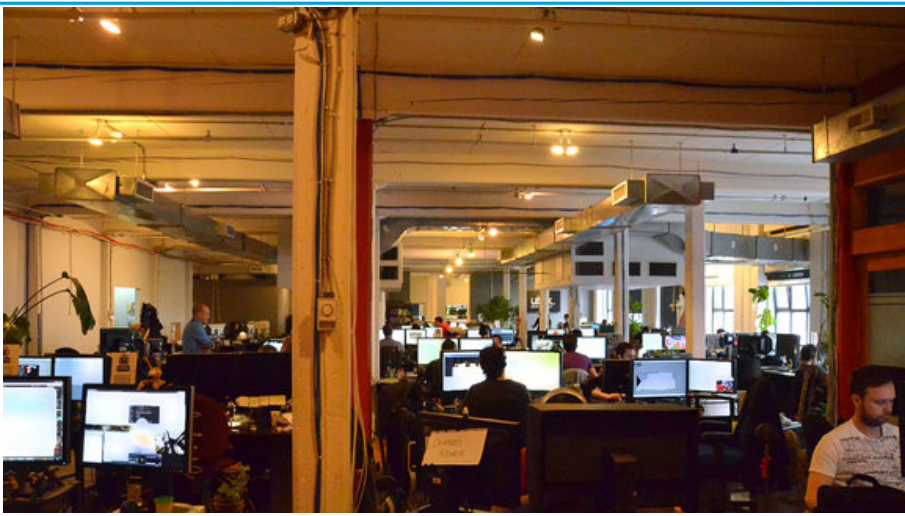
**David Lightbown** This way to consider user experience during production is becoming more and more common. When I gave my first presentations about this topic in 2012/2013, there weren't a lot of people dealing with the subject. Now you see more and more presentations, e.g., at GDC, and also more people across the industry doing it, even though it's still a niche topic.

**Making Games** Do you think the topic becomes more important the bigger a company is?

**David Lightbown** I think it's definitely something that helps when you have reached a certain size. To make our tools and programs more accessible supports cross-collaborations between the teams and studios and generally helps to start projects much faster.

**Making Games** Why do you think your work is necessary at all? Why don't developers see themselves that a tool isn't efficient?

**David Lightbown** I think the reason for this is that all the technology, consoles and all the things we use to make games are just too complex, and it's hard to make it simple. We come from an industry where there used to be only one person doing the programming, graphics, sound design, etc. As game development got more complex and the teams were growing, it was a natural evolution that people started to specialize in certain areas. Where you had a generic programmer a few years ago, you



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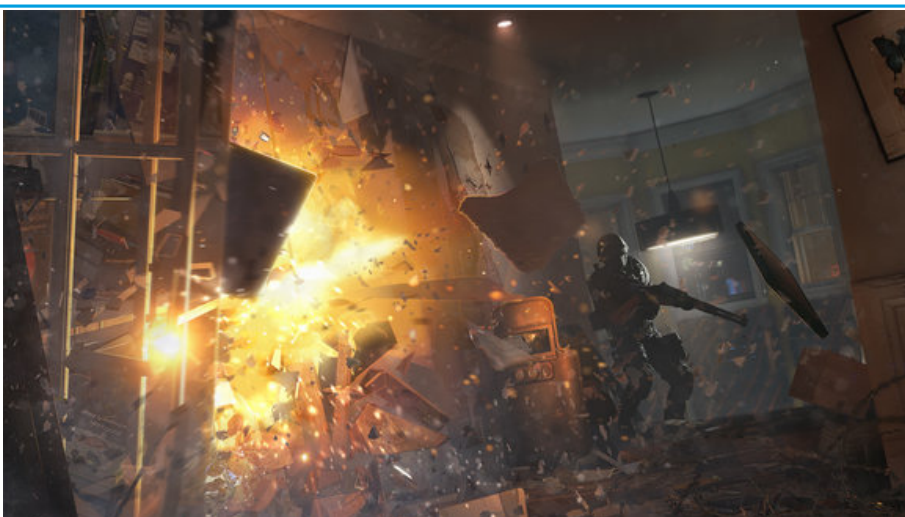
the-games-industry-was-still-young-there-would-usually-only-be-one-person-doing-a-number-of-tasks-today-as-the-teams-are-growing-people-specialize-in-certain-areas-and-consequently-tools-become-a-lot-more-complex-to-use\_11279.jpg)  
*When the games industry was still young, there would usually only be one person doing a number of tasks. Today, as the teams are growing, people specialize in certain areas, and consequently tools become a lot more complex to use.*

now have someone specializing in physics, rendering, etc. So it's only logical that we also have people who specialize in productivity for tools.

**Making Games** Do you think there will be a point in the future where you can say your job is done?

**David Lightbown** No, my job will never be done. In fact, that's a good point because with every game and with every generation of consoles the technology becomes more and more complex; the data become bigger, the gaming experiences become richer, and we can't use the same tools every time to be able to deliver these things. We have to be constantly improving our tools and optimizing our pipelines, not only for one game, but for an entire franchise. So while a team is still working on a game of one series, we're constantly working on the tools in the background to make sure that they're already more optimized for the sequel.

” *Intuitiveness doesn't really exist. What people really mean is that it feels familiar.*



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making-the-destructible-environment-for-rainbow-six-siege-it-was-necessary-to-provide-tools-that-everybody-on-the-team-was-able-to-use-in-order-to-allow-as-many-iterations-as-possible\_11281.jpg)  
*When making the destructible environment for Rainbow Six: Siege it was necessary to provide tools that everybody on the team was able to use in order to allow as many iterations as possible.*

**Making Games** Certainly every team has UX designers who are focusing on the players. Are there any overlaps between their work and yours?

**David Lightbown** That's a good question. I'd say the techniques are the same, but the goals are different. When I take a product like my iPhone, one of the goals to a certain degree is just desirability and pleasure using the device. For us that's not our goal when it comes to tools. Our goal is to be efficient and to iterate as many times as possible.

So if I was to make a »Super Mario« game that was efficient, I would place the flag that is to be reached directly next to Mario for him to pick it up right away. However, we have blocks and things that we can jump over to get to the flag, and this way to manipulate the game world is what makes it fun. We want our tools to be the equivalent of this effective Mario; we want the mouse to be next to the flag and to be able to pick it up right away. The techniques that are used to add tension for the player, can also be used to reduce those obstacles as well. So there is some cross-correlation between the UX for the player and the things we do.

*Interview: Sebastian Weber*

## Further information

David Lightbown held two presentations about User Experience for Tools, and he has also written a book, which can all be found at the following links:

- Recorded presentation of »The User Experience of Game Development Tools« held at GDC Europe 2013 from the GDC Vault (free of charge): [www.makinggames.biz/UXGDCEU13](http://www.makinggames.biz/UXGDCEU13) (<http://www.makinggames.biz/UXGDCEU13>)
- Book »Designing the User Experience of Game Development Tools«: [www.makinggames.biz/DavidLightbownBook](http://www.makinggames.biz/DavidLightbownBook) (<http://www.makinggames.biz/DavidLightbownBook>)
- Presentation slides to the talk »Tools Development at Ubisoft: Building a Shared Vision to Improve the User Experience« held at GDC 2015 from the GDC Vault (a video recording of the same title is available from the GDC Vault at a charge): [www.makinggames.biz/LightbownToolsDevelopment](http://www.makinggames.biz/LightbownToolsDevelopment)

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