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# **NRC - CNRC**

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## *Tell me a story \**

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## Tell Me a Story

### Alain Désilets

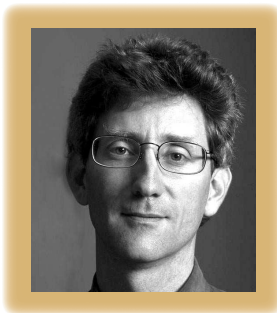
*A tricky aspect of designing software is remembering to consider the system user's perspective. It's easy to get caught up in thinking about designing a cool piece of functionality and to lose track of why someone would value using such functionality. Fortunately, talking through simple user scenarios can help keep you on the right track.*

*Here, Alain Désilets of the National Research Council of Canada explains how he uses this technique to help his fellow researchers identify software ideas of value to their users. Employing this technique in the context of a 10-minute conversation can make a big difference.*

*As Alain shows, being user-centric doesn't need to be a heavy-weight prospect. You can simply create a story about how a person might use your software to solve a problem or reach a goal. Note that this is a story—not a use case—so you can tell it at any level of detail. A high-level story will help you identify what features to build; a more detailed story will help you think through the usage of those features.*

*I like doing this collaboratively with a coworker—partly because I get embarrassed talking to myself but mostly because it helps me stay focused on the user. Also, my coworker can catch any inconsistencies in my story. So the next time you find yourself struggling with the details of your software's functionality, back up and tell a story. —Jeff Patton*

**A**s someone who works in an applied-research lab, I find that by far the hardest part of my job is choosing problems worth solving. I need to choose problems whose solutions are likely to lead to useful, deployed products five to 10 years down the line. Furthermore, I'm surrounded by bright and creative technology-oriented folks, so I'm exposed to dozens—even hundreds—of cool ideas each year.



Whenever I hear about a cool idea, I find storytelling to be a powerful technique for performing a quick sanity check. I ask the idea's initiator to tell me a detailed, believable story involving an actual person who uses the technology to achieve a goal. The conversation typically goes something like this:

ALAIN: Hi Matt, long time no see. What are you up to these days?

MATT: I'm working on an algorithm for automatically marking free-text answers to reading comprehension questions.

ALAIN: Sounds like a fascinating technical challenge. What kind of application do you have in mind?

MATT: I just told you. A system for automatically marking student answers.

ALAIN: I see ... or actually, I don't. Can you be more specific? Can you tell me a detailed story in which a particular person uses the system you have in mind? It doesn't have to be about a real person or event—although it's better if it is—but it should have a plausible character and plot.

MATT: Sure, that should be easy enough. The user starts the system and ...

ALAIN: Sorry for interrupting, but "the user" is not a compelling character for a story. Can you be more specific? For example, what's the person's name?

MATT: Why does the person's name matter?

ALAIN: Just humor me for a moment.

MATT: Alright. Let's call him Chee Ho. Like I was saying, Chee Ho starts the system and ...

ALAIN: Sorry for interrupting again. Chee Ho is clearly an Asian name. Is this significant to your story?

MATT: In a way, yes. Chee Ho is a student who needs to take an ESL (English as a second language)

exam to get into a US college. He's using the system to improve his performance on the reading comprehension part of the exam.

ALAIN: So you don't expect teachers to use the system? For example, you're not building this to save teachers time in marking ESL exams. It's meant to help students perform better on such exams.

MATT: Right. I guess teachers might also use the algorithm as a time-saving device, but I view it more as a learning aid.

ALAIN: Why?

MATT: Well, I think it's a more noble pursuit. Also, I have a feeling that learning aids are in higher demand.

ALAIN: What makes you think that?

MATT: I don't know .... Whenever I go to the bookstore, I notice a whole section devoted to books on how to improve your performance on college-entrance exams. So I definitely think there's a market for this sort of thing.

ALAIN: That's a good observation. So, what does Chee Ho do with this ESL learning aid?

MATT: He starts the system, chooses a particular reading comprehension exercise, reads the text, answers the questions, then presses the "Correct" button. The system shows him the questions he got wrong and the correct answers.

ALAIN: I see. How will that help Chee Ho improve his performance on future

reading comprehension exams?

MATT: Well, by showing him the right answer and where he made mistakes... but now that I think of it, I guess it's not that helpful, is it? It would be much better if the system showed Chee Ho how he might have arrived at the right answer. ... I wonder if I could use the same kind of algorithm to highlight sentences and words that hint at the answer in the original text—that is, the subject of the questions. Wow! I never thought of that, but combining this with automatic marking would make for a really useful product for ESL students.

ALAIN: Sounds like a promising idea. Can I join your project?

MATT: Sure thing! Let's go to my office.

This quick, 10-minute conversation brought many of Matt's assumptions about the user to the foreground. In doing so, this not only gave him confidence that the project is technically interesting but also suggested that the technology has a concrete,

plausible market. If Matt hadn't been able to quickly construct a believable story, I would have advised him to reconsider the project all together, or at least put it on ice until he could produce such a story. But in this (rather typical) case, storytelling allowed him instead to gain significant insights, which helped reorient the project toward a more useful product concept.

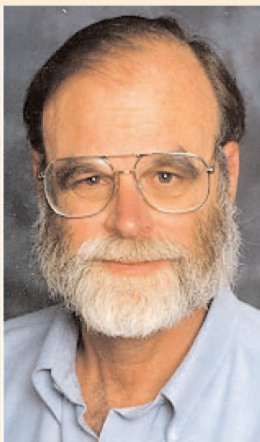
get lots of mileage out of this simple technique. Besides helping with choosing among competing ideas and projects, it's a useful tool for educating developers and showing them the value of user-centeredness. Many of my colleagues are never quite the same after they've experienced a conversation like this one. ☺

**Alain Désilets** is a researcher for the National Research Council of Canada. Contact him at [alain.desilets@nrc-cnrc.gc.ca](mailto:alain.desilets@nrc-cnrc.gc.ca).

### Related Work on User Scenarios

- A. Cooper, R. Reimann, and D. Cronin, *About Face 3: The Essentials of Interaction Design*, John Wiley & Sons, 2007.
- M.B. Rosson and J.M. Carroll, *Usability Engineering: Scenario-Based Development of Human Computer Interaction*, Morgan Kaufmann, 2001.

## Tribute to Honor Jim Gray



The IEEE Computer Society, ACM, and UC Berkeley will join the family and colleagues of Jim Gray in hosting a tribute to the legendary computer science pioneer, missing at sea since 28 Jan. 2007.

31 May 2008

UC Berkeley

- General Session: 9:00 am  
Zellerbach Hall
- Technical Session: 11:00 am  
Wheeler Hall

Registration is required for technical sessions.

[www.eecs.berkeley.edu/ipro/jimgraytribute](http://www.eecs.berkeley.edu/ipro/jimgraytribute)