Ivo Swartjes and Irene Anggreeni

**What do pirate tales and new industrial design methods have in common? More than you would think, if you ask Ivo Swartjes and Irene Anggreeni. Each in their own way, they're working on software that tells stories or generates scenarios.**

# *Pirate tales and design scenarios*

"The question we ask ourselves in the Virtual Storyteller project is whether a computer can tell stories by itself, in natural language. This always surprises people. I get many questions: that isn't possible, is it? Can a computer be creative? But suppose we define a number of virtual characters, each with their own goals, emotions and model of the world around them. I want to know if these characters will be able to interact autonomously and what events will happen in that case. These events can then be translated into natural language. A prerequisite, however, is that you limit the 'world' to something manageable. That's why we've chosen pirate tales as an example. The interaction can be iconic and does not have to be very realistic", Ivo Swartjes explains. He is doing his PhD research within Anton Nijholt's Human Media Interaction group.

Although Irene Anggreeni also deals with stories, in a way, she prefers to use the term 'scenarios'. Just like in Ivo's research, her scenarios can take different forms: role plays as well as narratives, storyboards or cartoon strips. Scenarios in Irene's project, within Fred van Houten's Design Engineering group, are descriptions that help the designer of new products. And not only the designer: scenarios help all stakeholders involved in the product. "In scenario-based design, you make all the steps in the process very explicit. You can think of scenarios describing meticulously the way people use a product or machine. This can be hypothetical as well. By doing so, you can detect typical problems a user might encounter using the product. A switch has been positioned in a very inconvenient place, say, or, a display can't be read under certain light conditions: you name it. Before even starting to write technical specifications for a new version of the product, scenarios provide you with a lot of knowledge about the improvements you need to make. What we would like to do is write scenarios in a way that all stakeholders can understand, scenarios that can be translated into visual forms, or into role plays. Just like Ivo, I want to develop software for generating the content or story line of these scenarios."

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"Therefore I recently organized a workshop for designers in which they had to design a relatively simple product, like the baggage carrier of a bicycle that will be on the market in five or ten years' time. The knowledge that industrial designers use is often very implicit in nature. It is stored only in their heads, or they exchange it on notes that only their colleagues can comprehend. I challenge them to translate this implicit knowledge into explicit knowledge using scenarios, and also to think about soft requirements. They then tend to say: OK, I understand what you mean, and it all makes sense, but it takes far too much time to write all this down. Without software generating scenarios, I probably won't be able to convince them."

Although both projects have 'story generation' in common, Ivo focuses more on improvised interaction. Apart from the interaction of the virtual characters, the user may step in as well. "In my spare time, I like to play improvisational theatre. The 'emergent narrative' technique you use there inspires me greatly in my research. The audience also has a role, just like the user in the virtual story. These may be elements that don't really match Irene's goals, but story construction mechanisms typically is something we both. We both invite people to investigate a reality that is not their own, and ask 'what…if' questions. The Virtual StoryTeller already finds its way into some applications in education, for example. A theme like 'bullying at school' could be treated in a virtual role play. You could help pupils deal with awkward situations, and train them to use certain approaches while they are in a safe virtual environment. I also foresee projects applying these virtual role plays in the army, for example. And what about how to deal with serious situations, like having to break bad news?"

Irene: "What I would like to achieve is for the designer to be more aware of the need to share knowledge. Scenarios can really help, and if we have good tools for writing them, we will save time. In our view, applying scenarios in the design process will bring products, environments and their interactions into harmony."