EDUCATED PLAY!

student game profile: AZ66

EXPLORING NEW IDEAS IN GAME CONTROL

AZ66 is an intriguing UNREAL mod created by students at France's ENJMIN (National School of Video Game and Interactive Media) that combines real-time data generated by the player's heart rate with a devious "capability test" that has no win condition. Set in a dystopian world where citizens are given logic and reflex tests to determine their usefulness to society, AZ66 evokes a sinister mood and an elevated sense of panic as the player's heart rate has an increasingly disruptive effect on their perception of the game. We talked with AZ66's designer Stéphanie Mader to find out how the game (literally) gets under the player's skin.

Jeffrey Fleming: Can you tell us a bit about the history of the project?
Stéphanie Mader: *We are students at ENJMIN, the only public institute in Europe to deliver a Master's degree in games and interactive digital media. As our school is focused on the specialties of game design, graphic design, sound design, programming, project managing, and ergonomics, a big part of the program is to teach us teamwork, with responsibilities divided according to each member's specialty. During the first school year, we had to make several video games as a team.*

JF: How did the team get together and divide responsibilities?
SM: *Before starting the project, some members of the AZ66 team had already worked together. So, when we came up with the idea of doing a video game using heart sensors, part of the team reformed and some new members joined, in order to have a full development team of six students from each specialty area.*

JF: How much time did it take to complete AZ66?
SM: *For this project we had three months, but we had classes and exams too. On top of that, each member was working on other projects at the same time. Planning the teamwork was a true puzzle.*

JF: How did you approach AZ66's game design?
SM: *Due to the heart sensors, the game had some concept challenges. It was all about bluffing the player and getting him nervous. To accentuate our game design intention to its maximum, AZ66 includes a bomb that can't be defused, never-ending targets that pop up, and a labyrinth with no exit. Dark and dirty visual art, disturbing sounds, and the constant presence of voices all work to distract the player.*

The AZ66 team.

JF: On the technology side, what was the most challenging ?
SM: *We had to learn to work with Unreal Engine, its architecture, its tools, its pipeline, and its script language. As a result, programming and asset integration took most of our time. At the same time, our programmer had to deal with getting the sensor data into the game, while our usability expert worked on the player's comfort when wearing the sensors. But Unreal Engine was also what made our project achievable!*

JF: I'm curious about the biofeedback element in AZ66. How did you measure heart response in the player and how did you connect it to gameplay?
SM: *We were lucky, because we had strong support from Jérôme Dupire who works at CEDRIC, the CNAM French state institute in computer research and development. Jérôme's team created a new version of their PLUG Project with heart sensors, skin response, and temperature, a total of five sensors connectable to the player. In fact, we only used data coming from the heart sensors, due to time constraints. We used the player's variations in heart rhythm to give real-time feedback on his emotional state.*

But remember, it is all about bluffing! So the heart rate data didn't really affect gameplay directly, instead it affected the player's perception of the game. We wanted the player to think that his heart response was important by making it audible during the whole game, so he could hear his loss of control. In response to his heart acceleration, we applied graphics filters like motion blur to the screen. To complete our deception, we added some contextual feedback. For example, in the first room, the graphic and sound of the bomb timer becomes strange. In the same way, the speed of the cube that follows behind the player in the labyrinth is directly connected to his heartbeat.

AZ66 TEAM

Project Manager:
Stéphan Froment
Game and Level Designer:
Stéphanie Mader
Programmer:
Antoine Sarafian
Environment Artist:
Delphine Soriano
Sound Designer:
Aymeric Schwartz
Ergonomics:
Mélanie Ginibre
Voices:
Laure Nowak and Aymeric Schwartz

AZ66 links

AZ66 http://az66.interaction-project.net
ENJMIN www.enjmin.com
PLUG Project http://interaction3d.fr