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# case study Billy Bear's Honey Chase



# designing for the future

The words "computer game" may mean pretty much the same thing as "lurid murder" to a lot of people. Nearly all screen games seem to involve bloody, nonstop shootings, beatings or explosions, usually carried out with high-tech metal weapons the size of Godzilla.

Amanda Almon has gotten tired of that. The Cleveland Institute of Art Associate Professor of Biomedical Art and Chair of the Game Design program makes a point now of encouraging her students to design nonviolent entertainments. She's even started revising the curriculum standards for the program to encourage courses focused on Games for Change, aiming for game design that promotes learning instead of virtual violence.

So when Jared Bendis, Co-Owner of the app development company Lemming Labs Limited, needed an artist to design the images for an application that teaches sick children how to manage their pain, Almon came to mind faster than a wand comes to hand in a Harry Potter game.

Bendis calls her an amazing illustrator who "came in and added the flavor" to the game app, a task that perfectly married the skills and benefits of art with the goals of community health.

What the app needed first was a metaphor, explains Bendis, manager/designer for the project. Because its purpose is to teach young children timing and strategy in the context of their pain management — to develop a sense of timing and understand the nature of how best to plan and use any relief that can be afforded — the game had to have a premise that paralleled the situations and decisions children would need to face, but did so in an appealing, entertaining way.

Bendis and the app team thought up just the thing: a little cartoon-bear hero named Billy who must evade a bunch of bees to get to the honey pots they guard. Drawn in bright colors by Almon, with funny expressions and actions, Billy and the bees invite kids into a cheerful, understandable place where conflict is mild and comical and vying for the prize feels exciting, but not scary.

Once the app team knew what the game would be about and how it would work, Almon created sketches of the characters, props such as Billy's shield, and backdrops, as well as all title screens. While she developed the art, Bendis built the computer program using temporary pictures that he replaced with Almon's images as she completed them. Then they had to test the game to make sure it worked properly and to make sure they hadn't left out any features or functions.

The amounts of imagery and possible actions had to be just right. "There's a fine balance between adding too much and too little," Almon points out.

In addition, the game operations had to be age-appropriate, she says. Because young

children have less eye-hand coordination than older ones, the game needed simple controls: Players merely tilt the screen to move Billy Bear around the bees, somewhat in the same way that players of the classic game Labyrinth tilt a wooden board to move a marble through a maze. The goal is to collect a lot of honey pots without losing stepping stones.

Almon and Bendis did not want the game to be violent or upsetting in any way, but knew it would have to offer challenges, setbacks and rewards if it were to be interesting for kids to play. So when a player lets Billy Bear bump against a bee, the bee buzzes, but Billy doesn't get stung – instead, he gets stuck in the honey and loses stepping stones.

Nothing dies: If Billy Bear loses too many stones, he just ends up at home.

Getting around the bees takes skill, but players have a special power: When they really, truly need to use it, they can press a button and become temporarily immune to the bees, giving them and Billy a chance to move through the swarm without penalty. But they have to take into account that once they use the power, it can't be used again for a while.

Billy Bear teaches judgment. But most important, it's fun and kids – sick or well – like it.

When players decide that they need to use the special power, they press a green, glowing button that Almon has designed to look exactly like the buttons on the pain management machine.

With choices such as these, Almon and the app team have created an experience about cute, age-appropriate characters through whom children can test their abilities enjoyably. Though the little players' gaming mistakes do have consequences — an important learning theme — they can make them without the psychological threat of suffering anything really frightening, notes Bendis.

Billy Bear teaches judgment. But most important, it's fun and kids – sick or well – like it. It may also be creating an industry: Bendis says the game has won interest from other members of the local medical community who are starting to understand that scientific goals can be achieved more effectively through interactive and incentive based learning. "Once we had the one app, we started getting inquiries for more," he says. "Once their eyes are opened, they see the value in it."

He believes that art performs a critical role in health care. When esoteric knowledge needs to be imparted, "art can translate," Bendis says. "It gives you the opportunity to streamline and simplify an idea. Art allows us to direct attention and tap into emotion."

So much in the medical field is about fear, and biomedical art (appropriate to the target

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audience) can change that, he thinks. Kids are drawn to the Billy Bear game because his cuteness taps a part of the human brain that triggers good feelings. "How do you get them to want to play?" he asks. "The art is what brings them to it."

Almon sees therapies of the Billy Bear sort as the future of biomedical art and of young artists like her students at CIA. She notices that doctors who were once content with a line drawing now want fully rendered, digital drawings and 3D interactive images because they want clarity and visual impact on their patients and colleagues.

Such apps may also be the future of arts-related therapies and patient education, says Billy Bear team member Anne Stormorken, a University Hospitals critical-care pediatrician. Though a pain-management app is a brand-new concept, it's logical that children could learn this way, she says. "Kids don't learn from adults talking at them."

Even without the learning, Billy Bear – like other arts therapies and health education materials – are bound to make little patients feel better. Says Stormorken, "Any game that they play, any distraction, has been shown to help manage pain."



## About the Community Partnership for Arts and Culture

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