Issue #3

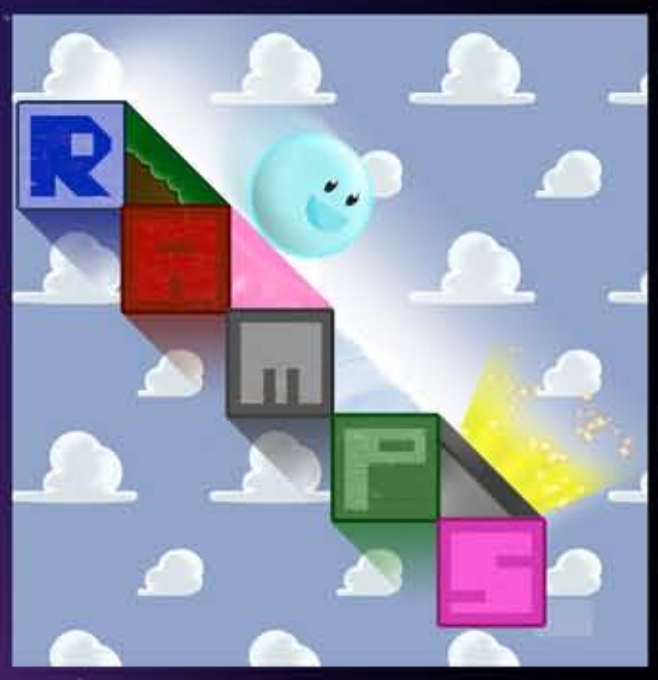
SCI-FRI

WEEKLY NEWSLETTER

Feb 3rd, 2012

RAMPS Prototype

We have completed the first iteration of a mini-game called RAMPS! In this game, children help a jolly avatar roll down ramps to collect stars. The first level is fairly simple: the star is right underneath the avatar and all a player has to do is break the ledge on which the avatar is sitting to make him fall on top of the star. As this occurs, the character gives an explanation about gravity and how it pulls all things down.



In consecutive levels, players not only have to break the ledge on which the avatar sits (thus reviewing concepts related to gravity), but also change the height of the ramp beneath the avatar that leads to the star. If a child picks a ramp that is too high, the avatar will roll past the star; if the ramp is too low, the avatar will not roll far enough. With this mechanic, we believe children's scientific reasoning skills will improve as they hypothesize about which ramp height is appropriate, test their theory, observe the result, and make modifications. In addition, the avatar gives explanations about potential energy and its relationship to height. Consecutive levels introduce another variable that children must manipulate: the friction of the ramp. The introduction of the second variable will make the children must isolate variables in order to test their hypotheses efficiently.

In-game assessments related to scientific reasoning skills and concepts of gravity and potential energy are provided before and after the game. By measuring the difference in scores between the pre-game and post-game assessments, we can quantify the extent to which the skills and knowledge of players improved.

RumbleBlocks Measurement

Sci-Fri is committed to measuring the efficacy of learning that occurs when children play RumbleBlocks. To that end, we have conducted several meetings with HCII to determine an appropriate strategy for measurement that is iterative and efficient and have started development on a list of changes to the game. When complete, the game will feature a new set of in-game assessment questions that will be a more accurate measurement of learning, a new game mode that gives children the chance learn how to identify structural components not necessary for stability, and a back-end data structure that organizes player actions into groups and takes screenshots of important groups of actions so as to make measurement easier.

Calendar

Feburary 6th, 7th, 8th

ENGAGE Summit
-Workshop in LA with ENGAGE teams.

February 13th, 15th, 17th

Quarters Walkarounds
-Faculty visit each project room and check on current progress.

Sesame Workshop

We are happy to announce that we've met, identified appropriate ways to start collaborating, and have begun that process. Sesame Street workshop is happy to provide us with advice on the age-appropriateness of our all aspects of our game (aesthetics, playability, fun factor)--we have already sent them materials from our RAMPS game to review. In addition, we are exploring the possibility of having Sesame Street Workshop conduct playtests of our games, which will help us get a broader range of data and playtesting information, which is key to improving our games.

HCII Human-Computer Interaction Institute
ETC global Carnegie Mellon Pittsburgh
Funded By DARPA

http://www.etc.cmu.edu/projects/sci-fri/