

(2) Interdisciplinary Initiative Project (IIP)
“Financial Simulator”
 Collaboration Between IMSC,
 the Marshal School of Business,
 and the USC Credit Union

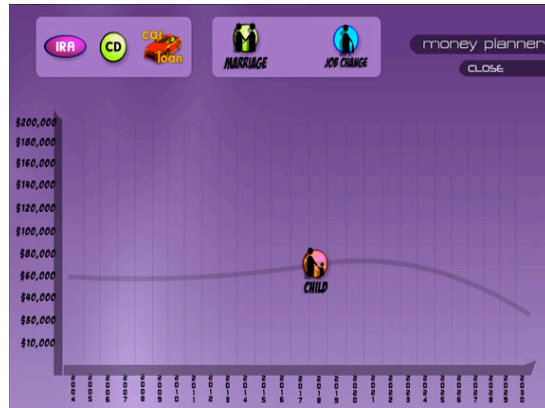
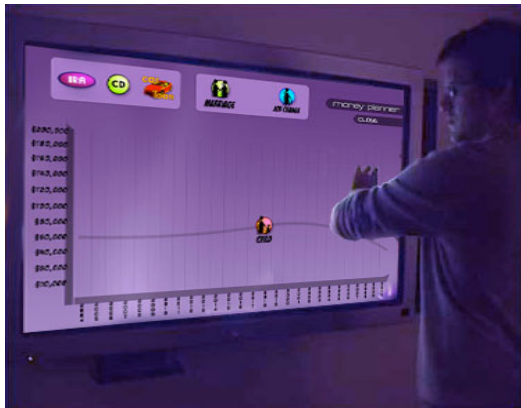
1. Research Team

Project Leader: Victor LaCour, *IMSC*
 Other Faculty: Prof. Ulrich Newman, *IMSC*
 Prof. J. Kimball Dietrich, *Marshall School of Business*
 Gary J. Perez, *USC Credit Union*
 Gregory R. Day, *USC Credit Union*

Graduate Students: Dhruv Pandey

Undergraduate Students: Tracy Wilson

Industrial Partner(s): USC Credit Union



Interactive Finance Simulator Kiosk allows users to see how “life events” affect their financial future.

2. Statement of Project Goals

This is collaborative project between IMSC, the Marshal School of Business, and the USC Credit Union explores how interactive multimedia technologies can be brought to bear on a novel application domain of financial services and products. We address this idea by providing a “sim-finance” marketing tool that allows people to model their finances and perform “what if” tests to see the impact of the financial products on their net worth over time. This project entails the construction of a simulator that shows the impact and benefits of various life events and bank services to the user’s monetary quality of life. The purpose of the application is primarily educational, where the game helps users in visualizing how decisions involving major

expenditures or long-term investments affect their monetary well being. Playing this game might teach people to be better savers, investors, and decision makers with a more clear perception on how various financial decisions can result in the long term. Secondly, this can be a means for Banks and financial organizations to promote financial schemes in a novel and comprehensive way. This would provide users a friendly and personable interface for playing with bank scheme options in various combinations with other financially critical life events and decisions.

3. Project Role in Support of IMSC Strategic Plan

Please see above introduction section.

4. Discussion of Methodology Used

The concept is a multimedia game that lets users see how a sequence of financially critical decisions and life events might affect their economic situation over a period of time. This economic trend is indicated to the user through a graph over time that shows net worth, spending capacity, and/or debt according to the user's choice along a determined time span. The curve is generated by a financial simulation engine that runs in the background and which takes into account the user's initial profile and the sequence of financially critical events entered. The application has a set of icons representing some commonly encountered financially critical events such as a car loan, retirement investments, opening saving accounts, marriage, child birth, job changes, etc. These icons can be dragged and dropped onto the aforementioned 'Wealth Curve' at a particular year on the horizontal axis. The 'Wealth Curve' can reshape itself accordingly to show what the predicted economic panorama of the person for the given sequence of financial events.

We define the following two components in general; GUI and Finance Engine

The GUI

The GUI functionality can be divided into 2 parts; taking input from the user, and secondly to output results. The inputs are

- a) The initial user profile that includes information like income, age, type of profession and information regarding some other choices depending on the design choice.
- b) The Financial Event Sequence described before which is created by the user by dragging and dropping Financial Event icons onto the wealth curve.

The Output is the Wealth Curve Generated by the specified Initial Profile and Financial Event Sequence. Whenever the Financial Event Sequence is changes the curve reshapes itself accordingly in animation. The Icons that were dropped onto the curve move with the curve as it changes shapes to remain settled on it.

Finance Engine

The input to the financial engine is the Initial User Profile and the Financial Event Sequence coming from the GUI. The Financial Engine first generates the Initial Curve. After that it checks each event in the Financial Event Sequence and adds the corresponding Difference Curve to the Initial Curve. Once we have added all the difference curves, what we get is the final curve, which

is sent back to the GUI. The GUI animates the previous version of the curve to its new shape as described before.

5. Short Description of Achievements in Previous Years

This is a new project, see below for achievements.

5a. Detail of Accomplishments During the Past Year

This project has involved many technical and social challenges over the past 4 months:

- a) A combination of attractive and compelling interface design and development written for front-end development in Flash MX
- b) An understanding of the application domain and candidate products worked out within members of IMSC, the USC Credit Union, and the USC Marshall Business School.
- c) A storyboard development of how the simulation is to be controlled and presented to the user.

6. Other Relevant Work Being Conducted and How this Project is Different

Other financial tools such as Microsoft Money or Quicken can offer smart and robust toolsets for budgeting your personal or small business finances. However, what these products lack are intuitive based interactions that include life event based simulations; enabling people to see how their life choices can effect their financial future.

7. Plan for the Next Year

See Below.

8. Expected Milestones and Deliverables

We expect to have a workable prototype by May 2003.

9. Member Company Benefits

The USC Credit Union will create a kiosk display that will house an installation version of the prototype game. Students, faculty and visitors who visit the credit union will engage and interact with the game. This will provide IMSC with user-centered data for future version development. This kiosk will also serve as an introductory interactive vehicle for the USC Credit Unions products and services. This will allow visitors to learn about the Credit Unions products and services through interacting with them via their own game-life simulations.

10. References

N/A