

A DEMONSTRATION OF FOUR WEB-BASED SIMULATIONS  
THRESHOLD COMPETITOR: A MANAGEMENT SIMULATION  
ENTREPRENEUR: A NEW VENTURE SIMULATION  
MERLIN: A MARKETING SIMULATION  
MICROMATIX: A STRATEGIC MANAGEMENT SIMULATION

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## INTRODUCTION

This demonstration will introduce session attendees to four different web-based simulations. The combination of these simulations covers a range of business disciplines and subjects. We will do a “walk-through” of each of the simulations, demonstrating the decisions, reports, and administrative activities involved in processing of decisions, etc.

After attending this session, ABSElers will be familiar with four new web-based simulations that they can use in four different courses. We will provide the session attendees with a handout with web links to the simulations.

## THE SIMULATIONS

The four web-based simulations we will present are *Threshold Competitor* (Anderson, et al., 2005), *Entrepreneur* (Anderson, et al., 2005), *Merlin* (Anderson, et al., 2005), and *Micromatic* (Scott, et al., 2005).

*Threshold Competitor* (Anderson, et al., 2005) models the managing of a small manufacturing business, which consists of selling two products with different cost structures in one sales area. It is a moderately complex total

enterprise simulation requiring students to make approximately 40 decisions involving elements of the marketing mix (e.g., price, quality, promotion), operations (e.g., hire and fire workers, order raw materials, set production levels), and finance (manage cash flow, borrow long-term funds) for each period of play. The instructor also has the option to invoke twelve managerial dilemmas (e.g., sexual harassment, alcoholism) that inject behavioral and ethical situations into the students’ decisions. While each team faces the same behaviorally-oriented or ethical situation, the response to the dilemma decision made by a company can vary among companies — even if the companies choose the same course of action in their attempt to manage the problem. Each decision represents a three-month (i.e., one quarter) period. It is designed for use in undergraduate courses in introduction to business, basic management, and strategy. It has also been successfully used in MBA short courses.

*Entrepreneur* (Anderson, et al., 2005) models the start-up of a small, two-product manufacturing business. Students start with only a pool of cash from which they must fund their planned operations. The first decision round simulates activities involved in the initial stages of creating a business; such as developing a business plan, contracting for space, materials, and people, and securing additional financing

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needed to grow the business. Each decision round represents a three-month (i.e., one quarter) period. Quarterly decisions include plant leasing and/or sub-contracting for production of products and financing growth through the use of venture capital. The selling of products in the competitive marketplace does not occur until the second round of decisions. As in *Competitor*, the instructor can invoke managerial dilemmas (behaviorally-oriented decisions) programmed into the software. *Entrepreneur* provides students in entrepreneurship courses the opportunity to experience the complexities of starting a business, the importance of managing costs, the need to manage fixed versus variable costs differently, and to demonstrate their understanding of business startup concepts in a competitive, but safe, environment.

*Merlin* (Anderson, et al., 2005) models the managing of a small marketing business, which consists of two products marketed in three sales territories, each with different profiles and demand territories. It is a moderately complex marketing simulation requiring students to operate as senior managers making approximately 70 decisions involving elements of the marketing mix (e.g., price, quality, promotion) for each period of play. Their quarterly decisions include selecting product characteristics (features and quality), setting prices, selecting media and a message (price, service, etc.), and investing in process improvements to lower costs (allowing development of cost as a competitive tool). Students are also given decision options that allow the development of a push versus pull promotional strategy. There are also decisions relating to the purchase of marketing research information and a small number (four) of production and financial decisions. Each decision represents a three-month (i.e., one quarter) period. *Merlin* is designed for use in undergraduate and graduate courses in basic marketing, and strategy.

*Micromatic* is a moderately complex strategic management simulation designed for use in senior-level and MBA-level courses. Students are required to make approximately 100 decisions involving one product marketed in three sales regions, one of which is in Europe and uses euros as its currency. Marketing decisions include pricing, quality, feature development, promotion (advertising, web marketing, and salesreps), sales commissions, and market research. Operations decisions include location of manufacturing facilities, plant construction versus leasing, and investment in technological improvements. Financial decisions include currency exchange, debt versus equity financing, issuance of dividends, and short-term loans to cover operational cash flow short falls.

### Team Versus Solo Versions

Each of these simulations has a Team version (i.e., student-managed companies compete against other student-managed companies) and a Solo version (i.e., one student-managed company competing against 15 computer-managed

companies, not other student-managed companies). The Solo version allows students to process their decisions and move to the next quarter of operation at their own pace, without need for instructor involvement. It also allows students to restart the simulation as often as they wish. That is, if students are not satisfied with their performance, they can quit that particular simulation run and initiate a new round of competition from the beginning (Quarter 1). This allows them to repeatedly restart the simulation until they achieve results with which they can live.

The solo version of the program can generate hundreds of different competitive environments. Using the solo version in combination enables students to have an introductory trial and practice period before beginning play in the team mode. Alternatively, instructors can set up a competitive environment of their choosing and use the solo version as an assessment tool to measure a student's learning without any team effect by having individually managed companies competing against the set of computerized rivals in a standard environment. Thus, instructors can use the solo version in a variety of ways: as practice preceding the start of the team version, for exams after completing their use of the team version, or as a stand-alone pedagogical tool.

The solo version offers many advantages. The students can run the simulation at their convenience, not tied to anyone else's schedule. If students perform poorly against the computer competitors, they can stop playing the current setup and start a new competition quickly and easily. Given enough time, every student can eventually achieve "success" in the exercise.

### Instructor Features

For all four programs, the instructor's program allows an instructor to modify some of the features of the student's program. These features include determining the economic environment (industry demand, costs, and weightings of performance variables) students will face, the influence of the marketing mix variable (price, quality, and promotion) on market share, and whether and when students will confront any managerial dilemmas (behaviorally-oriented decisions) programmed into the software. As instructors become more comfortable with the program's model, they can easily change the cost structure and marketing environment the student teams face. This flexibility allows the programs to grow with the capabilities and skills of the instructor and the students. It also allows instructors to determine the level of involvement and intervention they wish to have with the simulation exercise.

The instructor programs allow the instructor to printout or view instructor reports that show the performance of all companies operating in an industry. These instructor reports include Marketing reports (e.g., pricing, advertising, and unit sales), break-even analyses, operations reports (e.g., Mfg. COGS assessments), and financial reports (e.g., common size income statements).

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The *Competitor*, *Entrepreneur*, and *Merlin* instructor programs also allow the instructor to set up an exam form of the solo version. The exam option disables the student's restart option. This lets instructors use it as an assessment instrument to examine students individually, without team effects, on their knowledge of the simulation and their ability to manage their company in its competitive environment. By presetting the industry demand, costs, and weightings of performance variables, the instructor can have

all students face the same economic environment. With the restart option disabled, the students will have only one pass through the sequence of quarters to successfully manage their company. The instructor can then use the ratings on the industry performance factors to evaluate the student's performance. The instructor can conduct this exam either with all the students sequestered in a computer lab or as a take-home exam.

### AVAILABILITY

All four programs are available for immediate adoption. Contact information for each program is:

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▪ Entrepreneur	Phil Anderson,	phanderson@stthomas.edu
▪ Merlin	Leigh Lawton	l9lawton@stthomas.edu
▪ Micromatic	Tim Scott	timothy.scott@mnsu.edu