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# Interactive Online Positioning With the Web-based Product Positioning Map Graphics Package

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## **Abstract**

The Web-based Product Positioning Map (PPM) graphics package is an interactive online market segmentation analysis and positioning package that enables competing participant teams in the marketing simulation COMPETE to apply their knowledge of market segmentation analysis and positioning in strategic market planning. Participants with Web-access can use this package on a 24x7 basis to perform market segmentation analysis and positioning of their own brands relative to the brand positions of their competitors. This package enables participants to generate customized product positioning map graphic displays and to download and use them in their team reports and presentations at the end of the semester. They can create sophisticated build PowerPoint presentations to illustrate their own brand trajectories and the brand trajectories of their major competitors, as they cover the market segmentation analysis and positioning of their brands. This package facilitates the integration of computers, the Internet and the World Wide Web into the marketing curriculum.

## **Introduction**

The Web-based Product Positioning Map (PPM) graphics package is an interactive online market segmentation analysis and positioning package. This interactive online graphics package enables competing participant teams in the marketing simulation COMPETE to apply their knowledge of market segmentation analysis (Haley 1968, Johnson 1971, Myers 1996) and product positioning (Ries and Trout 1986) in strategic market

planning (Aaker 2001, Palia 1997). Participants with Web-access can use this package on a 24x7 basis to perform market segmentation analysis and positioning of their own brands relative to their competitors. This package facilitates the integration of computers, the Internet and the World Wide Web into the marketing curriculum.

The primary purpose of this paper is to present this new user-centered learning tool that helps to prepare students for market segmentation, positioning and marketing decision-making responsibilities in their future careers. The objective is to provide participant teams the opportunity (1) to plan, implement, and control a marketing program for their products and (2) to apply market segmentation and positioning concepts and procedures in a dynamic, complex and uncertain simulated competitive environment.

## **Market Segmentation Analysis**

Strategic marketing consists of segmenting, targeting and positioning. A market segment is a relatively homogeneous group of customers who will respond to a marketing mix in a similar way (Perreault and McCarthy 1996). Consumer markets are segmented by some researchers based on their geographic, demographic, and psychographic characteristics, and the needs or product responses of each segment are examined. Consumer markets are also segmented by researchers based on consumer responses to benefits sought (Haley 1968), use occasions, or brands, in order to see whether different consumer characteristics are associated with each consumer-response segment (Kotler 2000, Kotler et al 1999).

Once the market segments are identified and evaluated,

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the company decides which target market/s (market segment/s) to serve, and uses either a single-target-market segmentation strategy, a multiple-target-market segmentation strategy, or a combined-target-market segmentation strategy (Perreault and McCarthy 1996). The company considers one of five patterns of target market selection: single-segment concentration, selective specialization, product specialization, market specialization, and full market coverage (Abell 1980).

Having segmented the market, and identified a target market, the company next endeavors to differentiate its offering from competitors' offerings, and positions its offer and image so that it occupies a distinct and valued place in the target customers' minds (Kotler 2000, Kotler et al 1999, Kotler 1994).

The first and most widely accepted syndicated psychographic segmentation system, the Values and Lifestyles Program of SRI International, attempted to explain the substantial shifts in social values of the 1960s, and their potential effects on consumer behavior. VALS 2 was later developed with a sounder theoretical and methodological basis in order to avoid the criticisms of the original VALS program. The objective was to identify fundamental psychological orientations that underlie patterns of consumer preference and choice (Piirto 1991).

The COMPETE Product Positioning Map (PPM) package enables each of the competing participant teams in the COMPETE marketing simulation to generate a product positioning map for each of their own and competitor brands for each of the nine strategic business units. These product positioning maps are used by the participant teams together with VALS psychographic profiles and psycho-geo-demo-graphic data in market segmentation analysis and in positioning their brands.

The interactive Web-based Product Positioning Map (PPM) graphics package enables competing participant teams in the COMPETE marketing simulation to generate customized product positioning map graphic displays online. The customized graphic displays present the brand trajectories of each of their strategic business units relative to those of their competitors. These product positioning map displays are generated based on underlying team performance data. The data files are generated based on the team performance data and uploaded to the Web server by the professor.

Once these customized graphic displays are generated, participants can download and use them in their team reports and presentations at the end of the semester. They can create sophisticated build PowerPoint presentations to illustrate their own brand trajectories and the brand trajectories of their major competitors. They can use VALS data to identify target segments, and choose and illustrate appropriate repositioning strategies based on their understanding of the needs, purchase motivations, media behavior, purchase behavior and usage behavior of the

target segment/s (Palia 1997).

### **The Marketing Simulation COMPETE**

COMPETE (Faria, Nulsen, and Roussos 1994) is a widely used marketing simulation designed to provide students with marketing strategy development and decision-making experience. Competing student teams are placed in a complex, dynamic, and uncertain environment. The participants experience the excitement and uncertainty of competitive events and are motivated to be active seekers of knowledge. They learn the need for and usefulness of mastering an underlying set of decision-making principles.

Competing student teams plan, implement, and control a marketing program for three high-tech products in three regions within the United States. The features and benefits of each product and the characteristics of consumers in each region are described in the student manual. Based on a marketing opportunity analysis, a mission statement is generated, specific and measurable company goals are set, and marketing strategies are formulated to achieve these goals. Constant monitoring and analysis of their own and competitive performance helps the teams better understand their markets and improve their decisions.

Each decision period (quarter), the competing teams make a total of 74 marketing decisions with regard to marketing their three brands in the three regional markets. These decisions include nine pricing decisions, nine shipment decisions, three sales force size decisions, nine sales force time allocation decisions, one sales force salary decision, one sales force commission decision, twenty-seven advertising media decisions, nine advertising content decisions, three quality-improvement R&D decisions, and three cost-reduction R&D decisions. Successful planning, implementation, and control of their respective marketing programs require that each company constantly monitor trends in its own and competitive decision variables and resulting performance.

### **Web-based Product Positioning Map (PPM) Graphics Package**

The Web-based BCG Matrix Graphics Package is an interactive online market segmentation analysis and positioning graphics package. This package differs from the PC-based COMPETE PPM Package developed with Borland's Turbo C Version 2.01 programming language. The web-based graphics package has a modular design. Following the simulation run for each decision period, the simulation administrator uses windows script files (front end) to transform the COMPETE simulation output for each industry into a ppm.dat file. Next, the administrator renames the generic ppm.dat file in each industry folder to an industry-specific file name such as ppmC.dat for

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Industry C, and uploads the file to the corresponding Industry C folder on the web server.

Later, the competing participant teams log in to the COMPETE Online Decision Entry System (CODES) website (Palia and Mak 2001, Palia et al 2000). Their login is validated against a database of participating teams for each industry. When they select the Product Positioning Map option from the CODES Main Menu, the web application selects the correct data file for their industry and presents them with several options. They can select one or more companies to be plotted, the product to be plotted, the region to be plotted, and whether they want the plot for every (a) period, (b) two periods, or (c) four periods. In addition they have a choice of color or black and white plot.

After the options are selected, they click the Submit button to generate the graphic display link to a .PDF file. Later, when they click on this link, the graph is opened in Acrobat Reader. The process can be repeated with different display settings. The graph can be imported into Microsoft PowerPoint or Microsoft Word for subsequent presentation or report respectively.

Product Positioning Map displays are generated at the end of each period of operations and permit the participant teams to determine the position of each of their strategic business units relative to the corresponding strategic business units of their competitors. In addition, the participant teams can determine the trajectories (direction and degree of movement) of each of their strategic business units. Competitor brand trajectories can also be generated and analyzed. Based on these displays, the competing participant teams can monitor the existing position of each of their brands relative to the corresponding brands of their competitors. Next, they use the VALS 2 (Values and Lifestyles) framework to (a) identify heavy user target segments based on VALS data. Then, they understand the needs, purchase motivations, media- purchase- and usage-behaviors of the target customer segment/s based on VALS typology descriptors and external research. Finally, they develop appropriate marketing strategies to reposition their brands.

### Design Framework

A modular design was used. The Web-based Product Positioning Map (PPM) Graphics package has three functional blocks for data collection and transformation, graph generation, and graph presentation. Figure 1 illustrates the data flow among these elements.

### Tools Used

The following tools were used in the development of the Web-based Product Positioning Map Graphics package:

1. For the Web-based PPM.exe Program (Graphics back-end):  
LCCWIN32 C-compiler, developed by Jacob Navia.  
DISLIN scientific plotting library, developed by Helmut Michels.
2. For the Web-based Front-end (Data front-end):  
Javascript and VbScript
3. For the Administrator's scripts:  
ActiveState Perl 5.6  
Windows Scripting Host 2.0

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Figure 1  
Flow Chart  
Web-based Product Positioning Map (PPM) Graphics Package

