Global Information Technology Management

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Abstract

Globalization is the perception of the world as one big market place. The notion of the boundariless world is expected to produce dramatic changes in key markets, major competitors, and Information Technology products. As a result, organizations are encouraged to rise above the national boundaries and change their orientation to global corporations. Further, the increased spending in Global Information Technology, which is anticipated to grow several folds within the next five years, is adding fuel to this shift. Events such as economic integration of Europe, merging of the companies across national borders, stock exchanges, outsourcing of Information Technology services to the third world countries, and the use of World Wide Web are forcing companies to re-evaluate their Global Information Technology management and to develop Global Information Strategy so as to get the most out of their business in the world economy.

As the scope of Global Information Technology spans the global market, it is going to present mangers with a host of thorny issues. This paper suggests the key issues to be used as a guide for the Global Information Technology Managers to be successful in this fast changing technology oriented market, and also recommends Global Managers Evaluation Wheel which can be used for the appraisal of managers, subordinates, peer managers, on-site supervisors and clients working in the global Information Technology environment.

Keywords: Global Information Technology, Global Information Strategy, And Global Managers Evaluation Wheel

Introduction

The popular as well as the academic literature predicts a revolution in management thinking and practice as more and more industries are transformed into global enterprises (Tranctinsky, 1995). "The world," we are told, "has begun to resemble a global village" (Doktor, 1991). This village will be "a global marketplace for ideas, money, goods, and services that knows no national boundaries" (Hamilton, 1986). Globalization reveals an imposing future for the managers of many firms. In numerous industries, globalization has already produced dramatic changes in key markets, major competitors, and products (Ives, 1991).

Today, few organizations can avoid the effects of the globalization of markets, sources of materials, technology, and intellectual capital. Over one-third of American businesses' revenues come from foreign operations (Cateora, 1987). For example, IBM' s foreign earnings are about 40 percent of total revenue, and Control Data's foreign earnings are about 98 percent (Cateora, 1987). Information system managers are likely to find themselves in the vanguard of their- firm's efforts to cope with added complexity of the global organization.

Global Information Technology spending is increasing at an alarming rate. According to a recent report in Computerworld "*Global information technology* spending is expected to grow rapidly during the next five years, from a projected $1.4 trillion this year to more than $2 trillion in 2003, according to a report released last week by Spectrum Economics Inc., an economics consulting firm in Palo Alto, Calif.   By 2005, worldwide spending for IT products and services will reach $2.6 trillion, the report forecast. The report also predicted that the fastest-growing regional IT markets would be Latin America and Middle East/Africa, followed by North America, Asia-Pacific and Europe" (Briefs, 2000).

Firms operating in these new world markets will increasingly be at a serious strategic disadvantage if they are unable to firmly control their worldwide operations and manage them in a globally coordinated manner (Bartlett, 1989). "Faraway" events that wouldn't have commanded the attention of U.S. IT executives a few years ago are preoccupying them in today's *global* networked economy. IT executives at U.S. companies are learning that they must get closer to their international business units and be more flexible in deploying systems abroad, yet balance local procedures and needs with worldwide IT standardization efforts (Dalton, 1998). As a result, the understanding the distinction between a multinational operation and a global operation has become more important for IT management than the design and implementation of Management Information System (MIS).

Multinational Vs Global Corporation

It has been pointed that world markets are progressing "toward a converging commonality" and that the "global marketing" approach represents the prevailing trend in doing business (Levitt, 1983). According to Peter, a multinational firm is " a U.S. company with branches around the world that adhere strongly to American culture. But in the real world of the ultra-competitive 1990s, several major multinationals are not based in the U.S., and their cultures, like those of a growing number of American corporations, are neither American nor globally uniform (Peter, 1995). Firms have been described as "multinational" based on their operations, ownership, managerial attitudes, and social responsibility, among other criteria. A multinational firm may usefully be thought of as:

- A network of subsidiaries with an organizational structure to enable high coordination;

- A *global* arrangement of activities with world-scale volume and the flexibility of arbitrage;

- A firm with product diversity and a worldwide distribution system to enable cross-subsidization among products and markets (Raghunathan, 1990).

On the other hand, according to Porter "A firm belonging to the *global* category is one whose competitive position in one country is significantly affected by its position in other countries" (Porter, 1985). The *global* firm targets the international market without distinguishing national or political boundaries. Thus, it ranks high on market integration. Its structural considerations also require high value-chain configuration and value-chain coordination. Centralization is an integral part of this configuration because all foreign operations are controlled by the parent corporation (king, 1999). However, in *global* companies, decision-making is fairly decentralized (Thompson, 1987). Strategic alliances are high because the corporation and its subsidiaries aim to achieve long-term profitability through entrenchment in host countries.

According to Jerry J. Torma, director of compensation and international human resources at Westlake, Ohio-based Nordson Corporation, a global company should have the following features:

- Treats the world as a single market.

- More products sold outside the home country than within the home country.

- Worldwide sourcing of customers, employees, suppliers and technology--sourcing with a total disregard for national boundaries

- Glocalized, not centralized, decision making (glocal is a coined word derived from **global** and local)

- Research and development is implemented regardless of boundaries

- Non-national executives on the top-management fast track

- Shareholders are spread through-out the world

- Non-national directors on the company's board

- Traded on a non-national stock exchange.

According to King, "Our assessment of the international strategy literature leads us to conclude that five dimensions will be most useful in differentiating multinational corporations in a manner that will facilitate the systems-related goals of this study: (1) value-chain configuration, (2) value-chain coordination, (3) strategic alliances, (4) centralization, and (5) market integration. The validity and utility of a taxonomy based on these five dimensions are empirically tested in this study" (King, 1999).

Generally, the following distinction is seen between multinational corporations and global corporation. The multinational corporation operates in a number of countries, where in each case it adjusts with accommodating care, and therefore, high relative costs to the presumptive special conditions of the particular country. In contrast, the global corporation operates within resolute constancy, and therefore, at low relative costs as if the entire world (or major regions of it) were a single, largely identical entity; it does and sells the same things in the same single way everywhere (Levitt, 1983).

A detailed comparison between Multinational Corporation and global corporation as given by Hampton is also shown in **Table 1** (Hampton, 1987)**.**

Table 1. A comparison of assumptions about global and multinational corporations

Design	M.	Adjustments to products initially designed for domestic market.
	G.	International performance criteria considered during design stage.
Adaptation	M.	Product adaptation is necessary in markets characterized by national differences.
	G.	Products are adapted to global wants and needs. Restrained concern for product suitability.
Market Segmentation	M.	Segments reflect differences. Customized products for each segments.
	G.	Segments reflect between group similarities. Group similar products together.
Competition	M.	Domestic/national competitive relationships.
	G.	Ability to compete in national markets is affected by a firm's global position.
Place	M.	National distribution channels.
	G.	Global standardization of distribution.
Production	M.	Standardization limited by requirements to adapt products to national tastes.
	G.	Globally standardized production. Adaptations are handled

		through modular design.
Promotion	M.	National product image, sensitive to national needs.
	G.	Global product image, sensitive to national differences and global needs.
Price	M.	Consumers willing to pay more for a customized product.
	G.	Consumers prefer a globally standardized good if it carries a lower price.

Note: M denotes Multinational, G denotes Global

Forces Effecting IT Management

A *global* economy mandates a *global* IT strategy to get the most out of your business. For those executives that view rapid changes overseas as an opportunity rather than a burden, the payoffs can be considerable. Strategically placed *technology* investments, particularly in less-advanced countries or regions, can yield faster and higher returns than in the United States, IT executives say. Why? Lower development and deployment costs are two obvious reasons. But more important is the fact that even incremental IT support of outdated business processes and programs abroad can have a startling impact (Dalton, 1998). Below is a list of corporations, who are placing their investments in less-advanced countries and creeping higher returns.

General Motor Corp., earlier this year completed a $30 million implementation in Brazil of a proprietary system for automating factory floors. Jose Erias, CIO for Latin America, says that by automating the ordering of products and other manufacturing controls, the Brazilian operation realized immediate and substantial benefits because it can now respond more quickly to changing markets and produce more than one type of car on a single production line (Dalton, 1998).

Federal Express recently installed in Chile, Mexico, and Brazil an internally developed processing system that cut by 55% the time needed for inbound packages to clear customs. Toby Eduardo Redshaw, FedEx's CIO for Latin America and the Caribbean, wouldn't quantify the system's return on investment. But he emphasizes that FedEx's ability to gets its customers' packages through the customs maze is "a great big stick we can beat the competition with" (Dalton, 1998).

Events such as the economic integration of Europe are also forcing companies to re-evaluate their international IT organizations and infrastructures (Dalton, 19918).

Colgate-Palmolive is implementing a "shared-service" IT organization on the continent as opposed to one distributed country by country. The consumer goods company's rollout of SAP R/3 across Europe is the first major project under that organization. Each country's operation is still free to tweak the application for local requirements, but Colgate-Palmolive wants to move beyond building individual suites of applications, says Ed Toben, VP of *global* IT. The company plans to extend the shared-service model to other regions, he says (Dalton, 19918).

Eli Lilly & Co., overseas subsidiaries used to say they were special and requested their own software systems. Lilly is putting an end to that approach, rolling out standard SAP manufacturing, financial, and human resource modules in 29 countries. That transformation, however, involves getting "partners to buy into Western models," CIO Tom Trainer says, "and that cannot be done entirely within the IT world." The SAP implementation, for instance, is being driven by business executives who want to standardize research and manufacturing procedures. IT's job is to make sure that R/3 gels with those business processes. "This is very much a non-IT process," says *information* officer Ed Tunstall. "This is a business process." On the *technology* side, Lilly ensures that *global* IT projects get *global* IT input by requiring that people

from outside the United States constitute a quarter of the membership on various *technology* councils that operate under Trainer, in areas such as data communications, research and development, and organizational effectiveness (Dalton, 19918).

Amway Corp. CIO Bob Alston concurs that implementing effective IT overseas isn't simply a matter of transplanting the systems, processes, and culture companies are successful with at home. Companies such as Amway--a direct marketer of home and personal-care products that supports direct sales agents in dozens of countries--must strike a careful balance between maintaining business standards and accommodating the way people do business in other parts of the world, Alston says. "The price of being the ugly American is you are a failure in markets abroad," he says (Dalton, 19918).

U.S. Resellers Race Toward their Slice of Worldwide IT Market (Zarley, 1997)

The race to establish *global* IT reseller networks is heating up. Major U.S. channel players and their vendor partners are establishing beachheads in all regions of the world, as large corporate customers with *global* operations are demanding a single point of contact for computer or IT procurement, maintenance services, and asset management. But channel executives agree that because of the size, scope, and complexity of the *global technology* market, no single player can dominate. So, the organizations are scrambling for a share of the *global* market by acquiring foreign resellers or forming overseas partnerships (Zarley, 1997).

MicroAge Inc. in Tempe, Ariz., opened a London office last month that's staffed by project managers who will supervise rollouts across all of Europe for the company's *global* accounts, says John Lewis, president of MicroAge Integration Group. "Our domestic customers have asked us to deliver globally," he explains. "We are expanding our capabilities to serve customers on a *global* basis, and once we are established, we will go after in-country business." In August, the company also expanded its MicroAge Infosystems Services *global* network of service providers by signing agreements with integrators in Hong Kong, Singapore, and South Korea. And Lewis says MicroAge may actually acquire some of its European affiliates in order to bolster its *global* service network. Lewis says only about 5% of MicroAge's business is *global*, but he expects that figure to grow to 25% in five years. *Global* reselling "is a wide-open market," he says. "We are looking to expand in all points north, south, east, and west because our customers are driving us that way" (Zarley, 1997)

Effect of Internet

Because the Internet blurs boundaries, doing E-business subjects you to a host of unfamiliar jurisdictions, laws, taxes, cultures, and even technologies (Kappleman, 200). According to Kappleman, IT managers should "better understand the *global* implications of our work--legal, ethical, historical, sociological, and political, as well as technical—in order to make better, more profitable decisions. He suggests that there are four forces that "define the *Information* Age and affect the companies and industries in which we work, as well as the social and economic milieus in which we live. He further recommends that IT managers should "understand and anticipate the effects of these forces" to succeed. These forces are:

- Productivity: Doing more with less.

- Velocity: Increasing the pace of almost everything.

- Convergence: Blurring boundaries of all kinds.

- Brains: Managing data, *information*, and knowledge, as well as change (Kappleman, 2000).

The Internet exemplifies these forces at work. Made possible by *technology*, this *global* convergence of once-separate networks magnifies the forces' influence. We have barely be-gun to see the Net's effects. Even in the United States, online retail activity in the fourth quarter of 1999 accounted for less than 0.65%

of total retail business ($5.3 billion of $821.2 billion, according to the Commerce Department). Is there room for growth? Yes--but consider the *global* potential. About 4.6% of the world's population (275 million of 6 billion) had Internet access as of February 2000, up from 3.3% a year earlier. North America has about 5% of the world's population but about half its online population. It's projected that worldwide Internet access will increase during the next four years to about 10% and that there will be more than 700 million Internet-connected devices by 2003, up from 200 million last year (Kappleman).

Effect of Alliance

The partnership between major world organizations is also effecting the IT management. An example of such example is given below (The Digital Corp, 1999):

Dialog Corporation & Fujitsu Alliance: The Dialog Corporation has announced that it has signed a multimillion-pound *technology* licensing and distribution agreement with Fujitsu, Ltd., a *global information technology* and network solutions company. According to Dialog, this alliance between Dialog and Fujitsu represents an unprecedented endorsement of Dialog's InfoSort software, significantly advancing the strategy of establishing this *technology* as a *global* standard for *information* categorization. InfoSort automatically reads and indexes electronic *information* from a vast range of sources, making it easy to archive, retrieve, and share, says the company. In a *global* company, for example, this could include internal documents, correspondence, e-mail, news, spreadsheets, and databases, worldwide.

 This partnership between a major western company and a *global* Japanese *technology* company is believed to represent one of the U.K.'s largest-ever export orders for leading-edge software. Fujitsu is a leading provider of comprehensive *information technology* and network solutions for the *global* marketplace. Comprising over 500 group companies and affiliates worldwide--including ICL, Amdahl, and DMR Consulting Group--the Fujitsu Group had consolidated revenues of 5.24 trillion yen ($43.3 billion) in the fiscal year ended March 31, 1999. Fujitsu employs over 188,000 people worldwide (55,000 of whom are systems and service experts), has operations in more than 100 countries, and last year sold 3.82 million personal computers worldwide. In the Japanese market, Fujitsu is one of the largest Internet service providers, personal computer manufacturers, and online service providers. Dialog will receive multimillion-pound fees for licenses, services, and *technology* support in addition to royalties for sales of online services and InfoSort sales (both English and Japanese language). Additional royalties associated with new products and services under development are also catered for by this agreement.

Key Issues For Global IT Management

Carefully crafted investments in *global information technology* offer firms an opportunity to increase control and enhance coordination, while opening access to new *global* markets and businesses. But engineering such *global* systems presents numerous challenges to management (Ives, 1991). According to him, the key issues that a manager charged with managing *global* IT applications for U.S. multinational is likely to face--issues that must be mastered if the firm is to use IT successfully in the new *global* markets. The key issues for the global IT management as defined by Ives are; (1) the linkage of *global* IT to *global* business strategy, (2) *information technology* platforms, (3) international data sharing, and (4) cultural environments (Ives, 1991). According to him, the linkage of *global* IT to *global* business strategy approach for managing global IT can be further subdivided into Independent *Global* IT Operations, Headquarters-Driven *Global* IT, Intellectual Cooperation in *Global* IT, and Integrated *Global* IT.

 In a recent article titled "Practical Issues in Global IT Management", Edberg etc, has a very good advise for the Global IT Managers, which is summarized below:

   "World Wide Web, European unification, stock exchanges, and companies merging across national borders -- they all bring a world of issues to an IT manager's attention. As the scope of *in-*

formation systems increasingly spans the globe, IT managers encounter problems they never imagined. Sensitivity and awareness aid in solving these problems. IT managers for multinational organizations quickly realize that IT's effectiveness depends on the development of an IT strategy that is consistent with the nature and goals of the company. Further, the IT architecture must coherently integrate hardware platforms, telecommunications systems, software applications and development tools, personnel and procedures, and databases. Unfortunately, it is more difficult to implement the elements of a *global* IT than it is to envision them. Without attempting to catalog all of the problems, Table II summarizes and the following text describes the types of issues that the forward-looking IT manager must think about when a *global* IT system is contemplated or implemented" (Edberg, 2001).

Global Manager Evaluation

Some businesses have instituted the multisource appraisal in which input is provided by an expat's ***global*** manager, subordinates, peer managers, on-site supervisor and clients (Solomon, 1994). The global manager evaluation wheel as defined by him is shown in Table III.

Table II: Key Issues for Global IS Management by Category

Language
- Appropriate language is difficult to identify
- Transition is complex and time-consuming
- Differing formats for different languages

Cultural and Geography
- Varying prejudices and cultural mores
- Behavioral differences
- Differing symbolic formats
- New geographic and behavioral concerns for security and disaster planning

Legal Regulations and Enforcement
- Differing forms of protectionism
- Employee hiring, firing, compensation, and monitoring practices
- Intellectual property laws
- Accounting, taxation, customs, contracts, fraud, and bribery laws

Systems Development and Support
- Differing national standards
- Availability, training, and compensation of employees
- Different technical and business terminology
- Hours and availability of support

Level of *Technology*
- Varying levels of *technology* knowledge and awareness
- Availability of telecommunications facilities and support
- Differing uses of *technology* in businesses

Table II: Global Manager Evaluation Wheel

***Global* Manager: Evaluation Criteria**
- Personal successes

- All managerial skills
- Objectives

Clients: Evaluation Criteria

- Interpersonal skills
- Negotiation skills
- Customer skills

On-Site Supervisor: Evaluation Criteria

- Organization Skills
- Objectives
- Leadership

Peer Managers: Evaluation Criteria

- Team building
- Interpersonal skills
- Cross-cultural skills

Subordinates: Evaluation Criteria

- Leadership
- Communication
- Subordinate development

Corporate Strategies & Global IT Applications

The search for systems economies was usually the initial driving force for global IT applications in many firms. For instance, an engineering firm wished to use a common engineering database to share project work between its U.S. and Asian offices. In addition to anticipated variations in engineering codes and relative costs of materials, management soon discovered that the Asian project requirements demanded far more detailed specifications for contractors than had traditionally been required of their U.S. office.

Except for the economies of scale for systems, other divers were also to be considered. The following are the implications of some other common drivers for the global IT (Ives, 1991).

Global customer ---Firms that serve traveling customers (airlines, hotels etc.) find it necessary to have worldwide customer databases. Corporate customers with global operations that more and more are demanding integrated worldwide services are increasingly imposing a similar requirement.

Global product ---The product is either the same through the world (e.g., Coco Cola) or is assembled from subsidiaries through the world (e.g., security), currency exchange etc.) . Information systems can provide the ability to manage worldwide marketing programs.

Rationalized operation --- Different subsidiaries build different parts of the same product based on availability of skills, raw materials, or favorable business climate. For example, a computer manufacturer might build software in Japan, monitors in China, and circuit boards in Cincinnati and the U.S. MIS is used to coordinate the operations.

Flexible operations --- Operations al-e moved from a plant in one country to a plant in another. Fort instance, a computer vendor moves production of personal computers between plants in respond to labor strife or raw material shortages. Common systems exist across plants, which facilitates the move.

Joint resource --- National subsidiaries may share certain facilities or people. For instance, the Chinese subsidiaries for a petroleum company jointly own tankers or storage tanks. A material resource system is implemented to track the location of joint resource.

Risk reduction --- Risks associated with currency conversions, multiple global markets, and multiple traders are alleviated. For instance, a petroleum company develops a global system for bidding on crude oil contracts, or a multinational bank implements a global risk management system for currency trading.

Legal requirements --- Information requirements mandated by laws in one or more countries are consolidated. For instance, financial or environmental regulations imposed on a subsidiary may necessitate corporate-wide information requirements if the subsidiary intends to sell or use products manufactured elsewhere.

Conclusion

Global Information Technology spending is expected to grow rapidly during the next five years.   Because of the magnitude of this investment in the world market, many organizations will be forced to evolve into global corporations all over the world. The managers that will view these rapid changes in the global market as an opportunity rather than a burden will have considerable payoffs. Strategically placed investments in global information technology will provide an opportunity to increase control and enhance coordination to their organization while opening access to the new global market.

The size, scope, and complexity of the Global Information Technology market will present managers with problems they never imagined before. Managers will be forced to re-evaluate their Global Information Technology Management and to develop Global Information Strategy, which will help them to survive in the fast changing technology oriented global market. To be successful in this environment, the author recommend that the managers should use "The key issues for Global Information Technology Management" as suggested by Edburg, as a guide and "The Global Manager Evaluation Wheel" as recommended by Solomon should also be used for the appraisal of managers, subordinates, peer managers, on-site supervisor and clients working in the global environment.

References

Anakwe, Uzoamaka P.; Igbaria, Magid; and Anandrajan, Marugan. Management Practices Across Cultures: Role of Support in Technology Usage. Journal of International Business Studies. Fourth Quarter 2000. vol. 31, Issue 4, p653.

Barlett C. A. & Ghoshal, S. Managing Across Borders: The Transnational Solution. *Harvard Business School Press*, 1989.

Briefs: Business Advice. Computerworld. September 11, 2000. Vol. 34, Issue 37. P 58.

Carlyle, R. E. Managing Information System at Multinational. *Datamation*. March 1988.

Cateora, P. R., *International Marketing*, 6th edition, 1987.

Chandran, R., Phatak, A. & Sambharya, R. Transporter Data Flow: Implementations for multinational corporations. Business Horizon. Nov.-Dec. 1987. Pp. 74

Dalton, Gregory. Small World. Information Week. August 10, 1998, Issue 695, p38.

Doktor, R., Tung, R.L., and von Glinov, M.A. Incorporating International Dimensions in Management Theory Building. *The Academy of Management Review*. April 1991, pp. 259-261.

Edberg, Dana; Grupe, Fritz H.; Kuechler, William. Practical Issues in Global IT Management. *Information Systems Management*. Winter 2001. Vol. 18, Issue 1, p34.

Farley, L. J. Going Global: Choices and Challenges. *Journal of Consumer Marketing*. Winter 1986 -Vol. 3, No.1

Hamilton, A. The Financial Revolution, *The Free Press*, New York, NY, 1986, p 30.

Hampton, Gerald M. & Buske, Erwin. The Global Marketing Prospective. Advances in International marketing. 1987 – Volume 2, pp. 265.

Higgin, Lexis F., McIntyre, Scott C. & Raine, Cynthia G. Design of Global Marketing Information Systems. *The Journal of Business and Industrial Marketing*. 1991-Vol. 6, No.3-4

Ives, Blake & Jarvenpaa, Sirka L. Application of Global Information Technology: Key Issues for Management. *MIS Quarterly*. March 1991, pp. 33-48.

Kappleman, Leon A. Working in the Global Village. Information Week. March 20, 2000. Vol. 778, p 150.

King, William P., Sethi vikram. An Empirical Assessment of the Organization of Transnational Information Systems. *Journal of Management Information Systems*. Spring 1999, Vol. 15 Issue 4, P 7.

Levitt, T. The Globalization of Markets. *Harvard Business Review*. May/June 1983, pp. 92-102

"Multinational Turns from 10 Vendors to One", *Computerworld*. Vol. 18, No.9, Feb. 1984.

Nanus, B. Business, Government, and the Multinational Computer. *Columbia Journal of World Business*. Spring 1978-Vol. 13, No.1

Peter, Gwynne. Managing 'Multidomestic' R&D at ABB. *Research Technology Management*. Jan/Feb 1995, Vol. 38 Issue 1, P 30.

Porter, M.E. *Competitive Advantage*. New York: Free Press, 1985.

Raptis, G. & Collins, J. Managing Multinational Information System. *Management Accounting*. 1986 - Vol. 67, No.7

Raghunathan, S.P., and Chandran, R. Globality: Dimensions, Qualifiation, and Measurement. *Academy of International Business Proceedings*, Toronto. 1990, p 1-2.

Reynolds, G.W. Information Systems for Managers. West Publishing Company. 1988.

Solomon, Charlene Marmer. How Does Your Global Talent Measures Up? Personnel Journal. October 1994. Vol. 73, Issue 10, p96.

The Digital Corp. Fujitsu And Dialog in Global Internet Technology Alliance. Information Today. July/ August 1999. Vol. 16, Issue 7, p62.

Thompson, J.M., Faigle, T.W., and Short, J.E. We Are The World. *Information Strategy: The Executive journal*. Summer 1987, P 43-44.

Tractinsky, Noam; and Jarvenpaa, Sirkka L. Information Systems Design Decisions in a Global versus Domestic Context. *MIS Quarterly*. Dec. 1995, Vol. 19 Issue 4, p507.

Urrows, U., & Urrows, E. Putting It Together: A Look at How MIS Helps Campbell Soup Operate Multinationally. *Infosystems*. Vol. 31, No.11, Nov. 1984, pp. 122, 124.

Zarley, Craig; and Rosa, Jerry. Global Inroads. Information Week. October 27, 1997. Issue 654, p115.