Out-of-home Infrastructures

Oracle Media - Enabling the Information Age

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1 Industry overview

There will be major changes in the way businesses operate. Telephone, cable, hardware, and software companies are revamping the computing and communications infrastructure to create an Information Highway - a new popular network that will link the providers and consumers of information, entertainment, goods, and services.

New technologies, new business visions, and new financing are converging to form a backbone for this new electronic marketplace. Breakthroughs in network, data compression, video, computing, and software technologies, combined with appealing applications such as entertainment-on-demand, home shopping, education services, videoconferencing, and personalized publishing are driving this movement forward.

The Information Highway will provide a new distribution channel that will transform the nature of commerce. It will affect everyone: manufacturers, service providers, distributors, retailers, advertising media, and consumers. Manufacturers and service providers will be able to understand their markets better and produce more effective products because they will have more detailed customer requirements information. They will also be able to target the sales process more accurately and cut their distribution costs significantly by using electronic distribution methods. Distributors and retailers will also harness the power of information by providing electronic stores for the public. Consumers will benefit from the availability of highly personalized goods and services. They will pay less for these goods and services as retailers and service providers lower the overhead costs of operating physical stores. Consumers will also benefit from the convenience of instant access to a global set of merchants. They will be able to select from a multitude of novel entertainment, information, education, product, and communications offerings.

The construction of this electronic highway and marketplace is an immense challenge, both financially and technically. The sheer size of the investment required in laying down the fiber optic network is daunting. Telecommunications and cable companies will spend tens of billions of dollars improving the network and switches. Electronic service providers will spend billions of dollars creating their new "production" systems. An equal amount will be spent to outfit each home.
with a set-top (or other home electronics device) and to pay for the new services available on it.

Technically, this transformation of the business landscape depends on the smooth integration of the dozens of different hardware, software, and networking systems selected by these companies and the public. This integration is complicated by the rapid pace of technological progress that generates better solutions to each section of the Information Highway on a regular basis. The electronic marketplace is also moving into new technical areas by combining alphanumeric data with multimedia - pictures, freeform text, video, and audio - further increasing the complexity of the task.

For example, business applications like home shopping will pose complex challenges to the Information Highway. They will require a large volume of information - catalogs, photographs, fitting charts, promotional videos, inventories, and customer profiles. That information must be organized effectively to make it easy for consumers to browse through merchandise and purchase goods. Home shopping services will also handle inquiries, advertisements, purchases, credit checks, transfers, and other correspondence that will have to be routed accurately and securely. Customers from all over the world, using a variety of different home electronics, set-top, computer, and cellular devices will need easy access to the electronic stores. Links to the databases and operations of other businesses - suppliers, banks, shipping companies, and credit bureaus - will also need to be in place. Handling this diverse combination of requirements is a complex task.

2 Oracle: The information management company

As a leading company in the management and distribution of complex information, Oracle is qualified to provide the software core for this new electronic marketplace. Its expertise in large-scale relational databases is crucial to the smooth functioning of the complicated services and transactions that will take place in the electronic marketplace. Oracle has a number of key strengths in its software architecture: portability, reliability, scalability, and open standards.

2.1 Portability equals hardware independence

As companies create new applications for the electronic marketplace, they need to confront the reality of a rapidly changing, heterogeneous technology landscape. Network providers will be using a variety of server hardware, communications networks, and application environments. Consumers will enjoy a multitude of new home electronics appliances. Electronic goods and services vendors will design their operations around a varied set of hardware and software.

Oracle technology deals with the challenges of solving business problems in a heterogeneous environment. Already running on more than 100 different hardware