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# The Internet as Meta-Medium: Emerging Uses of the World Wide Web A Tutorial

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## Abstract

The Internet is currently conceptualized as a network of information systems, and is intended to deliver and receive primarily computer services. The evolution of the network, however, promises to soon provide not only information but also broadband entertainment and integrated communication services, as strongly implied by the recent AOL/Time Warner merger.

The question is whether the Internet is poised to supplant traditional media such as radio, telephone and television, or whether it will simply *supplement* these entertainment channels.

The purpose of this tutorial is to bring together key members of industry and academe to engage the audience in a discussion of the emerging developments in convergent multimedia suggested by AOL's recent merger activity. Dennis Gonier, Senior Vice President of America OnLine, and George Shirk, Editor of *Wired News* at HotWired, will represent the views of the Internet industry, while noted systems theorists and multimedia researchers Jim Courtney and Janna Poora will represent the academic view on multimedia convergence.

## Introduction

An evolutionary process has formed a new societal structure based on information and communication (Rogers, 1986; Ball-Rokeach and Reardon, 1988). As society evolves in step with its information resources, the recently announced merger of a dominant ISP, America OnLine, and a dominant media content and services company, Time Warner, appears to signal the beginning of a new stage of evolution in the public information utility we know as the Internet.

For some time, futurists have predicted that the Internet will become the primary delivery medium for most of society's entertainment, communication and information needs; the possibility is that every television set will soon become an Internet host (Hinden, 1995). However, the futuristic predictions of an interactive and integrated on-line society have not seemed particularly imminent until the recent business revolution represented by the AOL/Time Warner merger.

In a brief period of time, the Internet has evolved from a strictly academic information utility to a powerful commercial and consumer venue. As businesses and individuals explore the potential of the Internet for promoting and consummating business transactions, the question of how important information, communication and entertainment services might be delivered has also

been raised (Peterson, Balasubramanian, and Bronnenberg, 1997). It becomes practical, in view of the AOL/Time Warner merger, to ask whether Internet-based computer appliances might well come to simultaneously replace telephones, televisions and stereo systems in the modern home and office (e.g., Hinden, 1995)?

The technological capability to deliver rich media entertainment and communication content exists; most experts agree that the primary impediment to realizing the potential for delivery is communication bandwidth (Burke, 1997; Gupta, 1997; McDonald, 1997), and the AOL/Time Warner merger may well resolve this issue in one large corner of the market. However, the more pragmatic consideration of what sort of business infrastructure might be required to fund, construct and support such a futuristic meta-medium appears to have been substantially overlooked. Ironically, the marketplace has both raised the issue and answered the question in the form of the recent merger.

## Studying the Internet as *Medium*

There is a rich tradition of studying the Internet as an instance of media (e.g., Eighmey, 1997a; Eighmey, 1997b; Newhagen and Rafaeli, 1996; Rafaeli, 1988; Stafford and Stafford, 1998), using the venerable Uses and Gratifications theoretical perspective that evolved in the study of the fledgling television medium decades ago (e.g., Katz, 1959; Klapper, 1963; McGuire, 1974). Others have observed that what we learned from studying new media in the past can be applied to inquiries about emerging media (e.g., Eighmey, 1997b; McDonald, 1997; Newhagen and Rafaeli, 1996; Peterson et al., 1997), implying an application of media use research to understanding the Internet.

While the Web will eventually diffuse through the population (Burke, 1997), one likelihood is that the Web might be *integrated* with more traditional media and promotional vehicles in the near term (Peterson et al., 1997; Stafford and Stafford, 1998). In either eventuality, a tradition has been established in the literature of viewing and investigating the Internet as a medium, using media-based communications theories and perspectives.

## Network or Meta-Medium?

The Internet evolved as an interconnection of computers. It currently functions much as a computer network would be expected to, providing extensive information-based services to users. Yet, much of the Internet's entertainment potential has already been

technologically explored through experimentation with broadband communication channels and streaming technology for delivery of the rich media files that make up the desired entertainment content that might be provided through Web-based connections.

However, with the capability to deliver rich media entertainment services such as audio (which is already available on-line), video (which appears to be limited by current bandwidth capabilities), and integrated telephony (already commercially-available), the Internet might possibly take on the characteristics of a commercial medium for the delivery of *other* media channels (Stafford and Stafford, 1998).

Certainly, by technical definition, the Internet has always been a medium for communication. However, its practical use and culturally-understood role has generally been that of a computer network that facilitates the sorts of information exchanges that computer users are interested in. As the Internet evolves beyond its original role as an information utility for scientists, and becomes a more mundane (though certainly more societally-significant) consumer entertainment source, it begins to develop the capability to replace or supplement well known and familiar communications and entertainment media such as telephones, radio and television. In this sense, it appears to be evolving toward the role of *meta-medium*.

A medium that delivers multiple media (i.e., meta-medium) is far more than simply a network, though the Internet's role and functionality as an information delivery network has been and will continue to be important to society. The coming role of the Internet we now know in the information-enabled society of the near tomorrow is a key focus of this tutorial session.

### **The Academic Role**

As Rogers (1986) noted, academics and researchers are part of the new information age elite, having the necessary resources and specialized knowledge for early adoption and early exposure to the new technology of the Internet. That being the case, it is appropriate to involve academic researchers in a debate over what form the future medium is likely to take as it evolves to replace traditional delivery channels for audio/video entertainment and integrated telephony, in addition to vital information services. Although academics are not market-typical users, they probably have more experience and insight about the Internet than many consumers might.

### **The Industry Role**

In view of the potential multimedia convergence represented by the America OnLine/Time Warner venture, the purpose of this tutorial session is to bring to the table an industry expert currently involved in the landmark merger – Dennis Gonier, Sr. Vice President of America OnLine, along with an expert industry-watcher –

George Shirk, Editor of Wired News on the Internet-themed HotWired site. These individuals are at the leading edge of current industry practice and knowledge about the converged media phenomena and will be able to impart to the audience the most current and informed opinion about the future of multimedia on the Internet.

### **The Tutorial Session**

The intent of this tutorial session is to foster interactions between scientists, executives and technical journalists at the very point in time that the future role of the Internet in rich media delivery to homes and business is being decided by recent industry developments. Such a dialogue will serve not only to guide research efforts, but will also connect academic inquiry with business strategy formulation.

In addition, this tutorial will both inform and initiate inquiry, discussion and empirical research from scholars and business executives on the likely changes in form and function of the evolving network we now know as the Internet. To that end, the key focus of discussion will be the recent business events that are forming the future of the Internet and their likely near and long-term implications.

### **Discussion**

The merger that raises the issue related to the future form of the Internet as a meta-medium is likely to be only the beginning of the business activities which will significantly influence the evolution of information systems in society. It is important to begin considering the key issues related to this evolution now, so that they can be fully considered and empirically examined as additional developments transpire. In short, the time is now here to begin the process of considering the likely directions the information utility now known as the Internet is likely to take in the very near future.

This session will both formalize and focus the process of the inquiry in the form of an important national scholarly and industry venue.

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