



## RCN.COM- Internet Services



# IBM PATENT STUDY

- Overview of ISP-Related Areas
- Applying Selected IBM Patents

# IBM PATENT PORTFOLIO

- 30,000 Patents
- US Patent leader - 8 years running
- 2,886 US Patents Issued in 2000
- All aspects of Information Technology
- >1600 Licensees

# ISP- RELATED AREAS

- Online Services
- User Interface
- Multi-Media
- e-Commerce
- e-mail
- Quality of Service

## ■ Online Services

*f* **web Server Functions** including Hosting, caching, data interface, data distribution and client interface (e.g. transactional support).

## ■ User Interface

*f* Use of icons, graphics, windows and other technologies to enhance/customize the user interface.

## ■ Multi-Media

*f* **Compression** (GIF, JPEG, MPEG)

–Still Image, Motion Video and Audio Compression Systems and Methods

*f* **Streaming Technology** (Multi-cast)

–Transmitting and Receiving Multimedia Data via a Network to Enable Transmission and Playback to Occur Simultaneously.

## ■ e-Commerce

*f* Applications of the Internet to business and transactional processes.

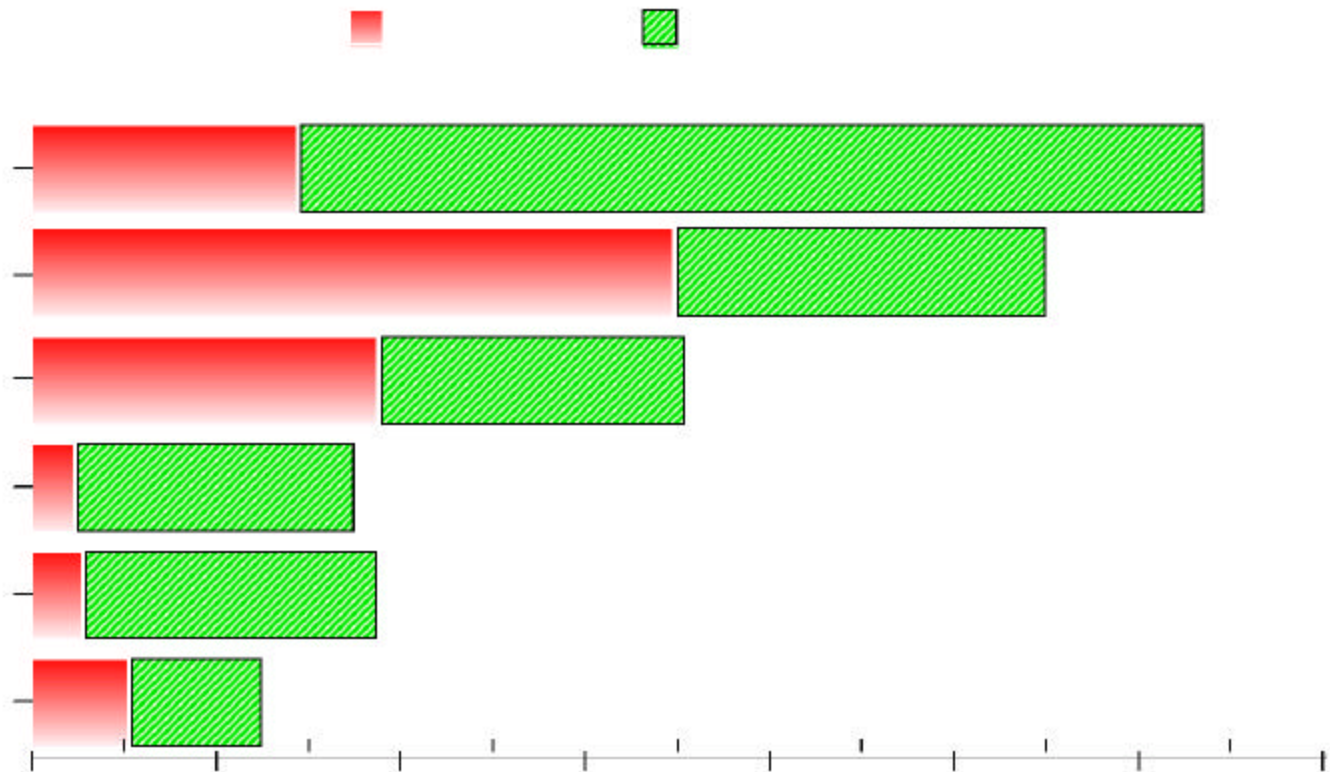
## ■ e-Mail

*f* Client, server and network processing of electronic mail.

## ■ Quality of Service

*f* Performance monitoring, reliability, availability, customer satisfaction

## ***Selected ISP Categories of IBM US Patent Activity***





# Online Services

**Approximately 150 U.S. Patents and 490 Pending U.S. Patent Applications.**

**Subject Matter Includes: Web Server Functions including caching, data interface, data distribution and client interface (e.g. transactional support).**

**Example -**

**US 5,931,913 (Meriwether)**

**Terminal type is transmitted to the server to enable the server to emulate the terminal's protocol and thereby reduce communication overhead. Can be used to support devices (wireless). Transcoding**



# **User Interface**

**Approximately 350 U.S. Patents and 200 Pending U. S. Patent Applications.**

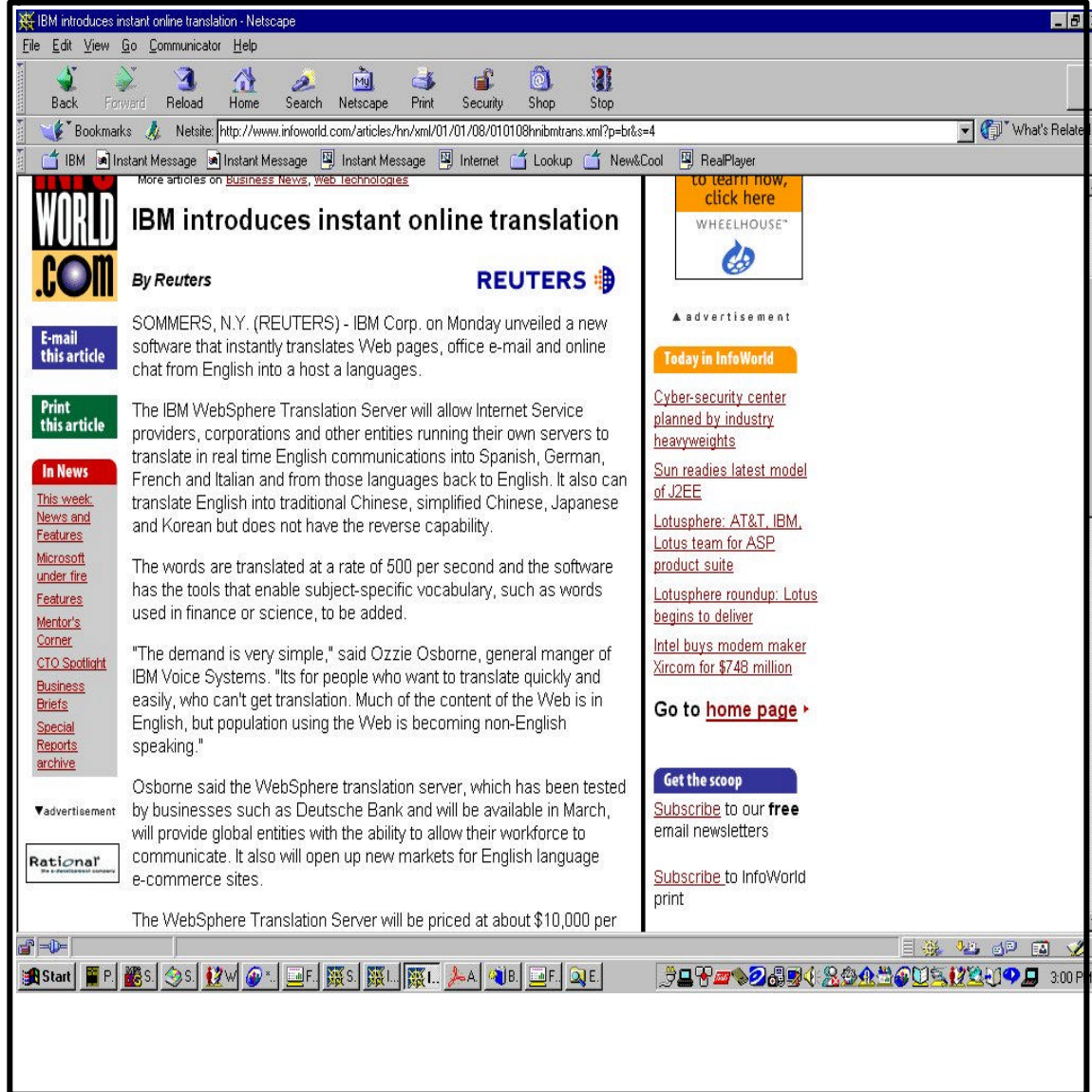
**Subject Matter includes: Use of icons, graphics, windows and other technologies to enhance the user interface.**

**Example -**

**US 5,961,601 (Iyengar)**

**Accumulating state information in the Web URL extension**

http://www.infoworld.com/articles/hn/xml/01/01/08/010108hnibmtrans.xml?p=br&s=4



US Patent 6,119,078



# **Data Compression**

**Approximately 160 U.S. Patents and 150 Pending Patent Applications.**

**Subject Matter includes: Still Image, Motion Video  
and Audio Compression Systems and Methods.**

**Example -**

**US 5,561,637 (Dan)**

**Method for pacing control in multicasting video. One of the clients  
in the multicast group is designated as "leader".**

# **e - Commerce**

**Approximately 25 U.S. Patents and 150 Pending U.S. Patent Applications.**

**Subject Matter Includes: Applications of the Internet to business and transactional processes.**

## **Example -**

**US 6,151,589 (Aggarwal)**

**Method for performing online auctions and negotiations. Bidder response activity is utilized to pace the bidding activity such that bidders are retained.**



# **Electronic Mail**

**Approximately 30 U.S. Patents and 160 Pending U.S. Patent Applications.**

**Subject Matter includes: Client, server and network processing of electronic mail.**

**Example -**

**US 5,732,126 (Fitzpatrick)**

**Telephone answering recording redirected to e-Mail**



# **Quality of Service**

**Approximately 55 U.S. Patents and 70 Pending U.S. Patent Applications.**

**Subject Matter Includes: Methods for providing reliable, useful, responsive service including server response time, customer satisfaction measurements etc.**

**Example -**

**US 5,751,967 (Ordanic)**

**Automatic determination and updating of thresholds in a computer network and graphic presentation of threshold status.**

## Patents used in value pitch:

4814746	compr	5706507	oline
4821211	gui	5878218	oline
4841574	mstream	5754774	oline
4994985	email	6119078	oline
5157488	compr	6138156	oline
5301242	mpeg	5875296	oline
5309433	mcast	5961601	oline
5325310	email	4821211	gui
5325310	email	5347632	gui
5347632	gui	6052676	gui
5349348	compr	5931913	gui trans
5361256	mcast	4814746	compr
5414469	mpeg	5349348	compr
5521630	compr	5521630	compr
5561637	mstream	5157488	compr
5627766	quals	5301242	mpeg
5634008	quals	4841574	mstream
5706507	oline	5561637	mstream
5721911	ecom	5309433	mcast
5732126	email	5361256	mcast
5751964	quals	5414469	mpeg
5754774	oline	5325310	email
5832460	ecom	4994985	email
5875296	oline	5325310	email
5878218	oline	5732126	email
5897639	ecom	5721911	ecom
5926798	ecom	5832460	ecom
5931913	gui trans	5897639	ecom
5961601	oline	5926798	ecom
6014637	ecom	6014637	ecom
6021439	quals	6151589	ecom
6052676	gui	6021439	quals
6070190	quals	6070190	quals
6119078	oline	5627766	quals