

# Network Centric World



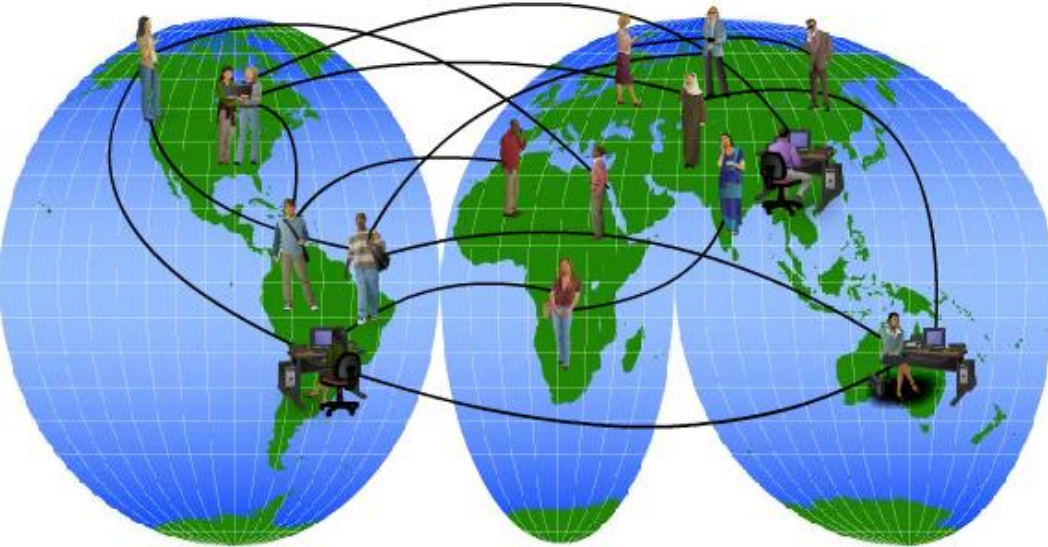
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# Definition

- Multiple computers connected together using a communications system
- The purpose of a network is for computer to communicate and share files

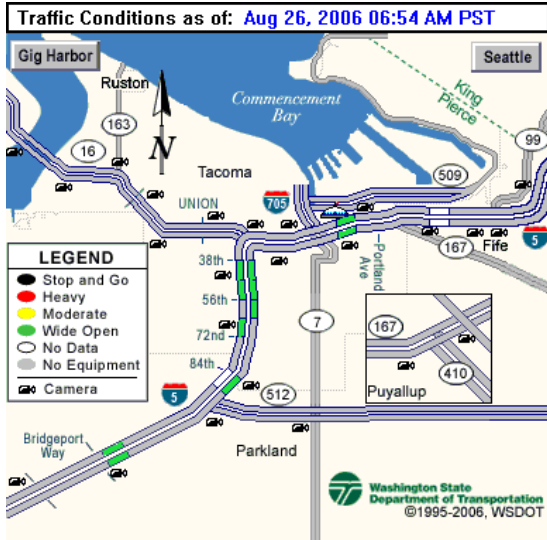
# Networks Supporting the Way We Live

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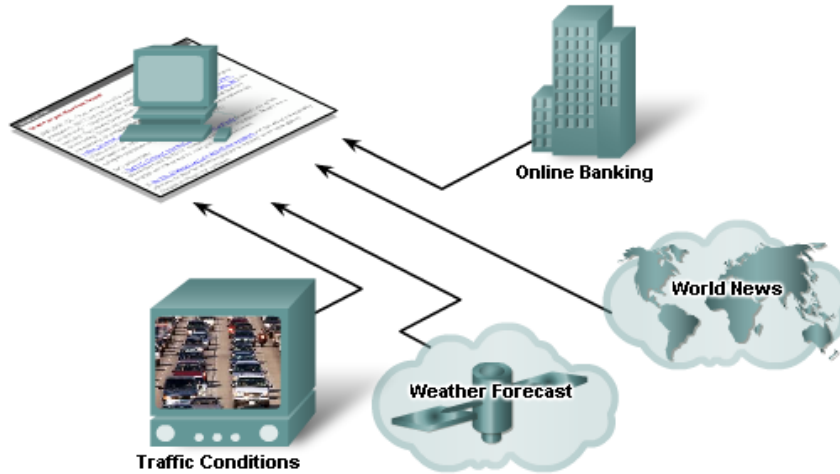


- The original idea about networks and the Internet was about sharing computer resources – **computer-to-computer** communications.
- That quickly changed to **people-to-people** communications.
- Early networks were limited to **character-based** information.
- **Communications between computers** was not common nor easy to do.

# Networks in the way we work



# Networks are integral in our daily lives



The way we live is supported by services delivered by the data network.

**Make Payment**

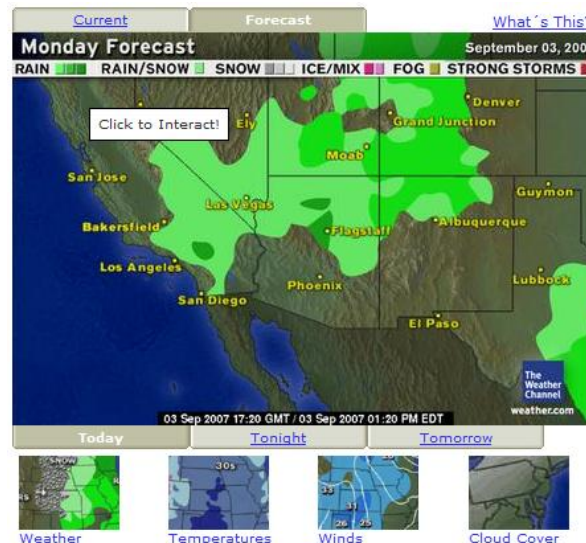
Note: Delivery time for payment varies by payee. See number of business days in Send On column.

Payee	Add a Payee	Pending Payment	Last Paid	Amount	Send On
COMCAST			\$49.93 10/4/2005	\$	10/19/2005 3 Business Days
MGM			\$100.00	10/3	5 Bus
PG&E		\$55.00 10/25/2005	\$65.00 10/2/2005	\$	mm 3 Bus
SPRINT PCS	Cell	\$49.78 10/20/2005	\$63.50 10/5/2005	\$	mm 3 Bus
Pending activation					
STATE FARM INS	Cell		\$260.00	10/3	5 Bus
Receiving eBills	View eBill				
WF HOME MORTGAGE	Cell		\$2,351.93 10/5/2005	\$	mm 3 Bus
Activate eBills	Cell				
WELLS FARGO VISA	Cell		\$1,339.93 10/5/2005	\$	mm 1 Bus

Close Calendar  
October 2005  
Su M Tu W Th F Sa  
1  
2 3 4 5 6 7 8  
9 10 11 12 13 14 15  
16 17 18 19 20 21 22  
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30 31  
Delivery Time: 3 business days  
Send On: Wed, 10/19/05  
Deliver By: Mon, 10/24/05  
Make

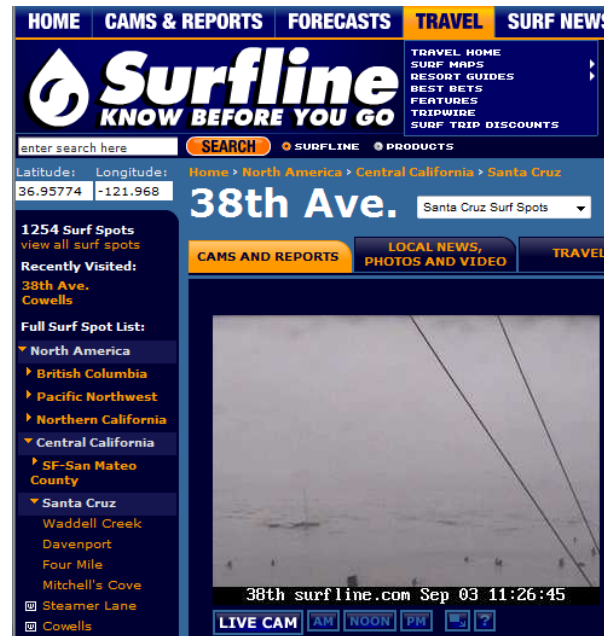
Cell = Electronic Bill What Are eBills? List of available eBills

<http://www.youtube.com/watch?v=fQKNvPn3V-8&mode=related&search=>

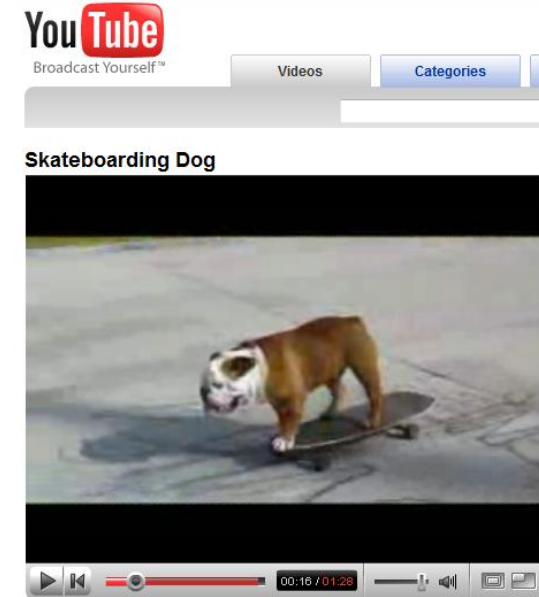


# Networks Supporting the Way We Live

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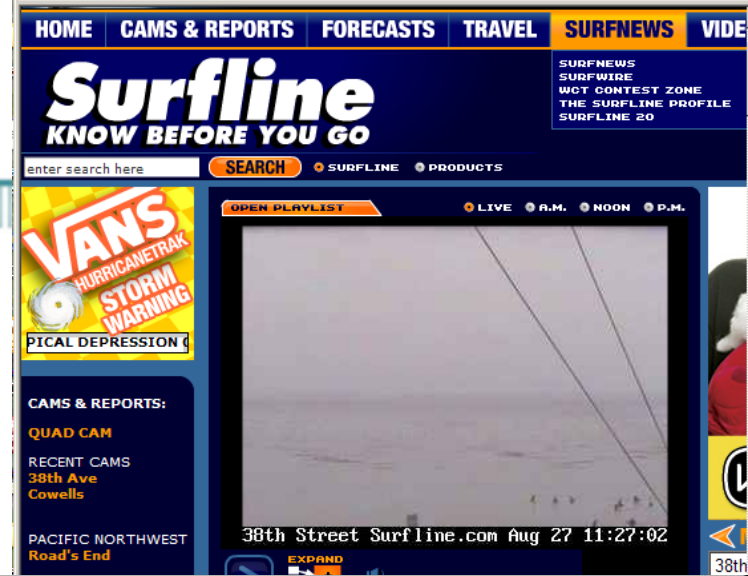
<http://www.youtube.com/watch?v=CQzUsTFqtW0>



- Today's networks carry between many different types of devices:
  - Voice
  - video streams
  - Text
  - graphics

# Networks in the way we play

- We rely on networks for our lives outside of work.



# Lab Activity: Google Earth



Hands-on Lab:  
Networks Supporting the Way We Live

The screenshot shows the Google Earth desktop application. The interface includes a menu bar (File, Edit, View, Tools, Add, Help), a search panel on the left with a search bar containing 'rome italy', and a 'Places' panel with a tree view showing 'My Places' and 'Sightseeing'. The main map area displays a satellite view of a city street grid in Rome, Italy, with several streets highlighted in yellow and red. Street names include Via Ravenna, Via Catania, Via Pavia, Via Ippocrate, Viale Regina Margherita, Via Tiburtina, Viale delle Province, Via Cupa, Via Arduino, Via Adalberto, Via di Sant'Appollino, Via Ludovico, Via Benigno, Via S. Maria, Via Michele (Nando), Via Barli, Via Siracusa, Via Treviso, and Via Stena. The bottom status bar shows coordinates (41°54'52.57" N, 12°31'03.54" E), a 'Streaming' indicator, and a zoom level of 100%. The Google logo and copyright information (© 2007 DigitalGlobe, © 2007 Lista Aziende fornito da PagineGialle.it, © 2007 Tele Atlas) are also visible.





# Networks – Behind the scenes

- More than just connecting cables... (that's the easy part)
- Today's networks are complex and sophisticated combination of protocols, software, hardware, algorithms, configurations, policies, and more
- Security
- Privacy
- 24 x 7 availability and access
- Quality of Service
- Video on Demand
- Voice over IP (over the Internet)
- Redundancy and backup
- Mission critical applications
- Productivity and user expectations
- Wireless



# Networks Supporting the Way We Play

- Email
- Personal Web Sites
- Sharing photos and videos (YouTube)
- Travel: Expedia, Priceline, Travelocity, etc.
- IM
- Gaming



Online Interest Groups



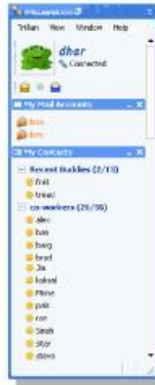
Online Games



Online Entertainment

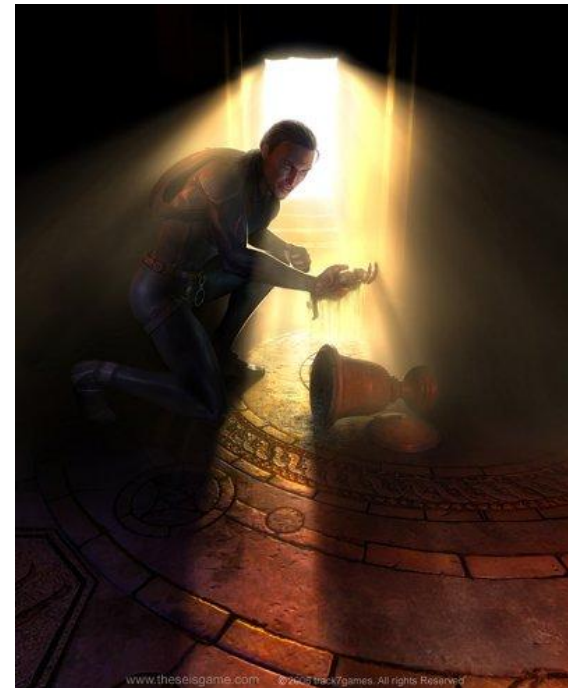


The onboard data network provides a range of services to airline personal seatback video systems.



Instant Messaging

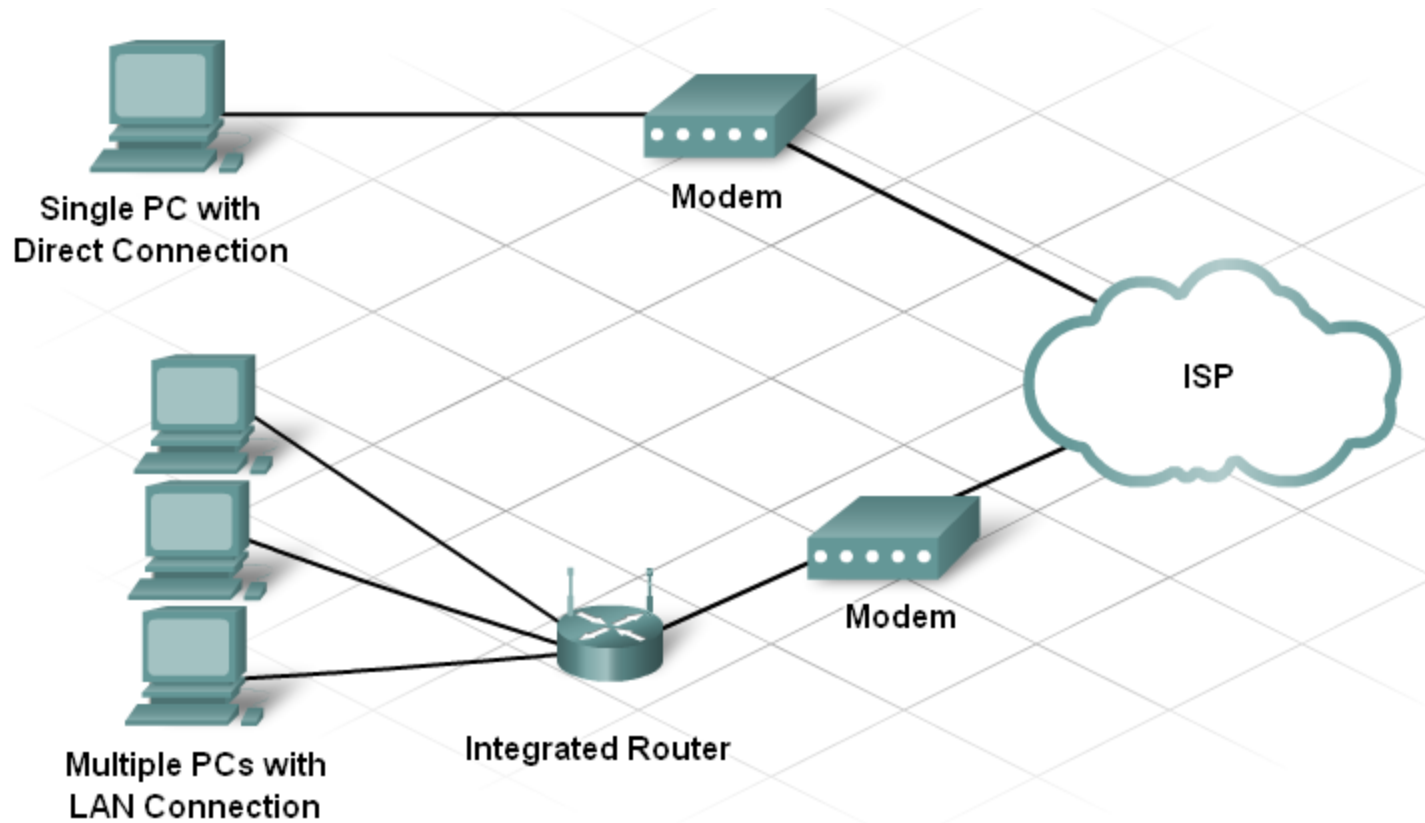
The way we play is supported by services delivered by the data network.



# Type of Network

- Networks come in all sizes.
- They can range from simple networks consisting of two computers, to networks connecting millions of devices.
- Networks installed in small offices, or homes and home offices, are referred to as SOHO networks. SOHO networks enable sharing of resources, such as printers, documents, pictures and music between a few local computers.
- In business, large networks can be used to advertise and sell products, order supplies, and communicate with customers.

# SOHO



# Medium Network

# Large Network

## The Enterprise Architecture

