

Why Computer Science?

Ed Lazowska

Bill & Melinda Gates Chair in
Computer Science & Engineering
University of Washington

August 2010

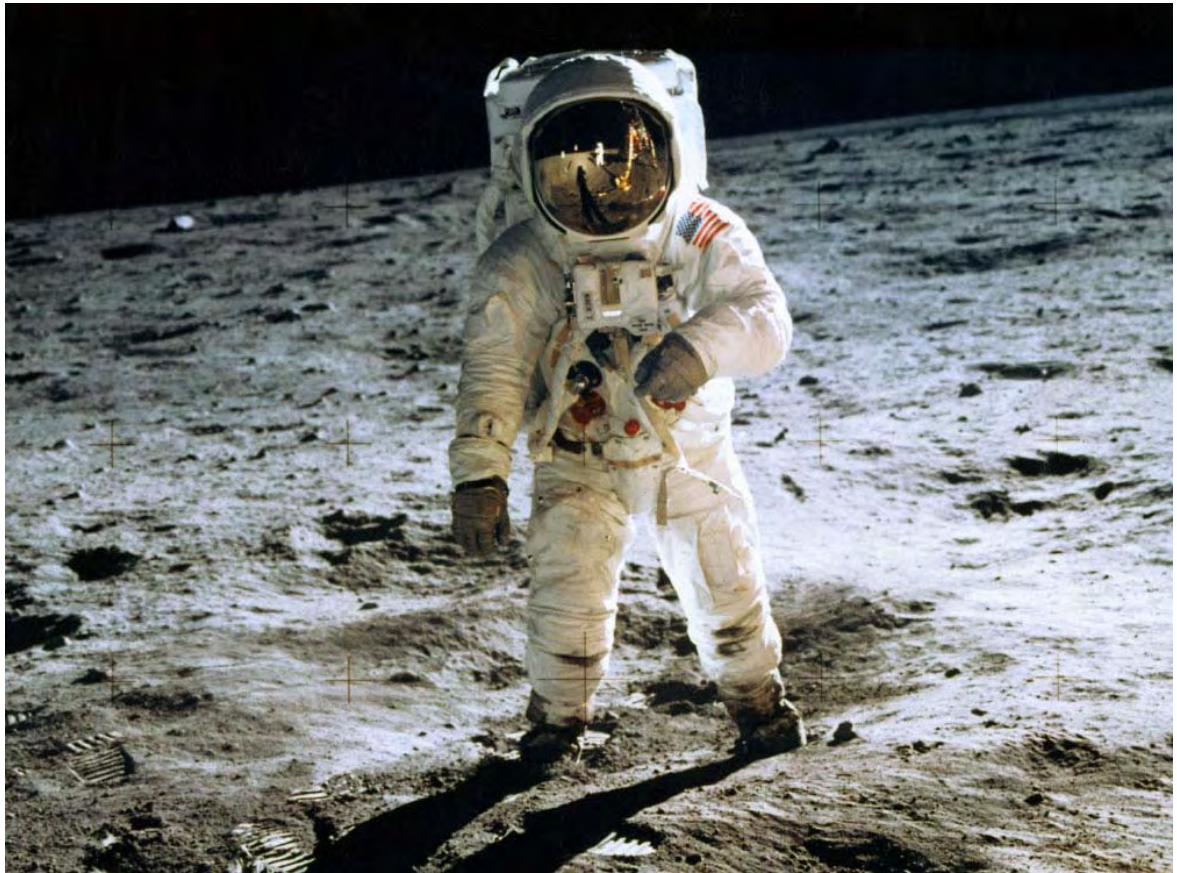


Forty years ago ...

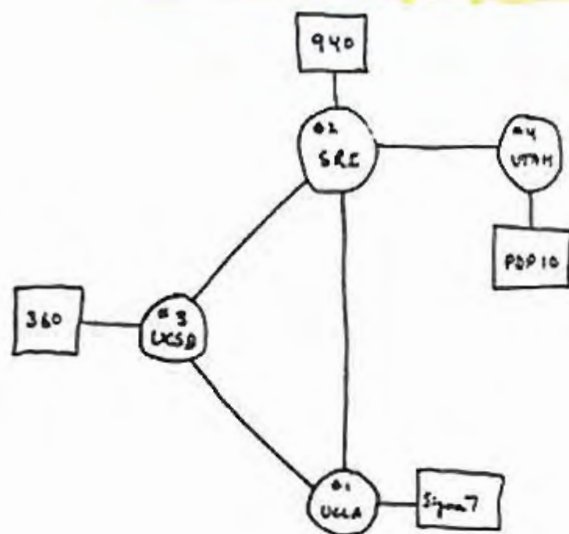








[Peter Lee, DARPA, and Pat Lincoln, SRI]



THE ARPA NETWORK
DEC 1969
4 NODES

29 OCT 69	2100	LOADED OP. PROGRAM	SK
		EDIC BEN BARKER	
		BBV	
	22:30	Talked to SRI	SK
		Host to Host	
		Left op prog running	SK
		after sending	
		a host dead message	
		to imp.	



With forty years hindsight, which had the greatest impact?

- Unless you're big into Tang and Velcro (or sex and drugs), the answer is clear ...



- And so is the reason ...

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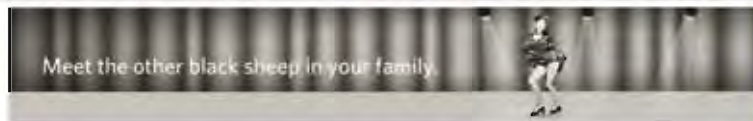
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Internet, Mobile Phones Named Most Important Inventions

By PHYLLIS KORRIG Published: March 7, 2009

In response to the shouted-out question, "What are some of the greatest inventions of all time?," nearly 600 office workers in a recent informal survey gave the following answers: the wheel, the engine, the ballpoint pen, diapers and the cheese Danish.

Life Changers

The top innovations of the last 30 years, according to judges at the Wharton School of the University of Pennsylvania.

1. Internet, broadband
2. PC and laptop computers
3. Mobile phones
4. E-mail
5. DNA testing and sequencing
6. Magnetic resonance imaging
7. Microprocessors
8. Fiber optics
9. Office software
10. Laser/robotic surgery
11. Open-source software
12. Light-emitting diodes
13. Liquid crystal display
14. GPS devices
15. E-commerce and auctions
16. Media file compression
17. Microfinance
18. Photovoltaic solar energy
19. Large-scale wind turbines
20. Internet social networking

THE NEW YORK TIMES

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Good, important choices all, but for classic, long-lasting appeal, they still can't beat the wheel. PHYLLIS KORRIG

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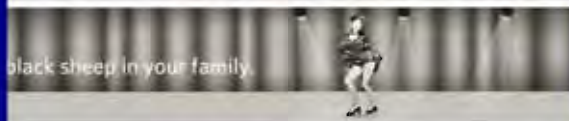
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Named Most Important Inventions

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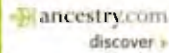
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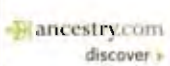
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- Scalability
- Digital media
- Mobility
- eCommerce
- The Cloud
- Social networking and crowd-sourcing



In the next ten years, we'll put the "smarts" in ...

- Smart homes
- Smart cars
- Smart bodies
- Smart robots
- Smart science (confronting the data tsunami)
- Smart crowds and human-computer systems
- Smart interaction (virtual and augmented reality)

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- Advances in CS drive economic growth
 - Not just through the growth of the IT industry, but through productivity growth across the entire economy
- Advances in CS touch everyone's lives - they change the way we live, work, learn, and communicate
- Advances in CS are inextricably linked to our ability to address our major national challenges
- Advances in CS have major public policy implications
 - Ranging from e-voting and identity management to the nature and global spread of democracy

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