

2. Computers with everything

History

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Angkor Wat temple, Cambodia




- How far?
 - Mobile signal
 - Internet café

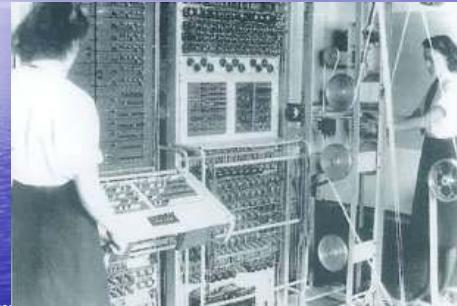
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Brief History of the Computer

- 1940s First real computers
 - Bletchley Park 'Colossus', 1943 (Cf: "Enigma")
 - Manchester 'baby' 1948
- Hand-built
- Military use (decoding German Enigma codes), research

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Colossus, Bletchley Park, ca. 1940



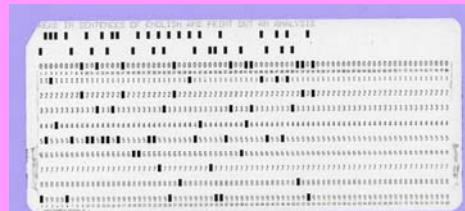
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Colossus rebuild project, 1996



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Punched paper tape and punched cards



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Manchester MU-1, 1949

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1960s

- Age of the Mainframes
 - Physically huge central corporate machines
 - 1st was LEO – Joe Lyons tea houses
- (D)ARPANet
 - Defense Advance Research Projects Association NETwork
 - Embryonic Internet
- Business and Scientific use

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Manchester MU-5, 1974



1970s and beyond

- 1970s First minicomputers, decentralisation
- 1971 Ray Tomlinson of BBN sends 1st email
- 1981 IBM PC (256Kb), 4 MHz, no hard disk
- 1984 Apple Mac (mouse, windows, menus)
- 1990s WWW; Take-off of Internet
- 2000+ Wireless computing, GRID
- All times: Rapid exponential increase in speed and capacity (Moore's Law) plus decrease in cost

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Simultaneous advances

Sphere of influence	User interface
<ul style="list-style-type: none"> • Military • Scientific, Academic • Corporate business • General office • Home • Pervasive 	<ul style="list-style-type: none"> • Front panel switches • Punched tape or cards • Teletype (roll paper) • VDU (TV-like display) • Windows, Mice, Menus • Natural language • Voice, eye, gesture • Intelligent agents

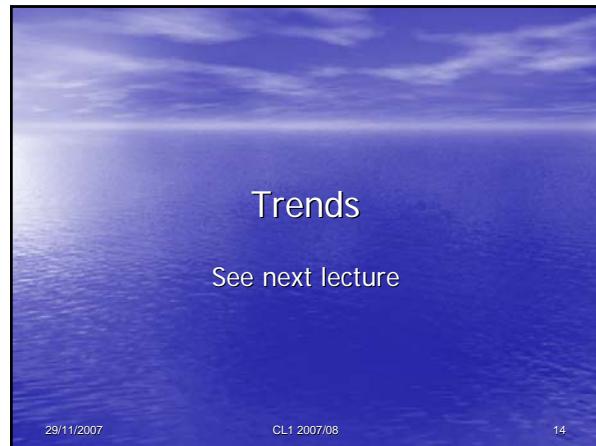
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