



# Another Welcome to the

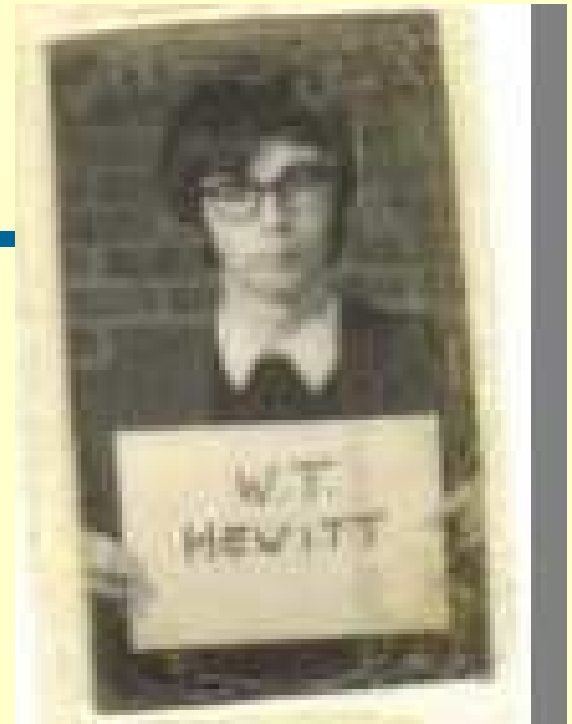


*W T Hewitt  
University of Manchester*





- Who am I?
- University of Manchester
  - Manchester Computing
- Manchester
- Why CUG chose Manchester
- English 101
- How to make it different
- NUDITY!
- SORDID MUSIC!
- MUCKY VIDEOS!
- Quiz



Manchester Computing Europe's premier university computer service

# The University of Manchester



- One of the oldest in the UK
  - Established 1851
- One of the largest in the UK
  - Student numbers
  - Research Income
- One of the best in the UK
  - Research quality
  - Graduates getting jobs
  - Teaching



# Computing at Manchester



- Fundamental Computer Science. World firsts:
  - Stored program 1948
  - Commercial computer
  - Index registers
  - Virtual Memory
  - Dataflow machine
  
- Applications of computing, e.g.,
  - Molecular modelling, chemistry, engineering,...
  - Medicine, social anthropology, ageing process
  
- Computer Services
  - Manchester Computing

19748  
*Millman Highest Factor Routine (revised)*

Line	C	26	268	27	Line	013348	1248
-24 C	-b <sub>1</sub>	-	-	-	1	00011	010
c #26		-b <sub>1</sub>			2	01011	110
-26 C	b <sub>1</sub>				3	01011	010
c #27		-b <sub>1</sub>	b <sub>1</sub>		4	11011	110
-22 C	a	-b <sub>1</sub>	b <sub>1</sub>		5	11101	010
del 27	a-b <sub>1</sub>				6	11011	001
del 26					7	-	0..
del 25					8	00101	100
del 24	r <sub>a</sub>				9	01011	001
c #25	r <sub>a</sub>				10	10011	110
-25 C					11	10011	010
del 24					12	-	011
del 23	0	0	-b <sub>1</sub>	b <sub>1</sub>	13	-	111
-26 C	b <sub>1</sub>	r <sub>a</sub>	-b <sub>1</sub>	b <sub>1</sub>	14	01011	010
del 23	b <sub>1</sub>	r <sub>a</sub>	-b <sub>1</sub>	b <sub>1</sub>	15	10101	001
c #27	b <sub>1</sub>	r <sub>a</sub>	-b <sub>1</sub>	b <sub>1</sub>	16	11011	110
-27 C	b <sub>1</sub>	r <sub>a</sub>	-b <sub>1</sub>	b <sub>1</sub>	17	11011	010
c #26					18	01011	110
del 26	r <sub>a</sub>	-b <sub>1</sub>	b <sub>1</sub>		19	01011	000

20	-3	1011100
21	1	10000
22	4	00100

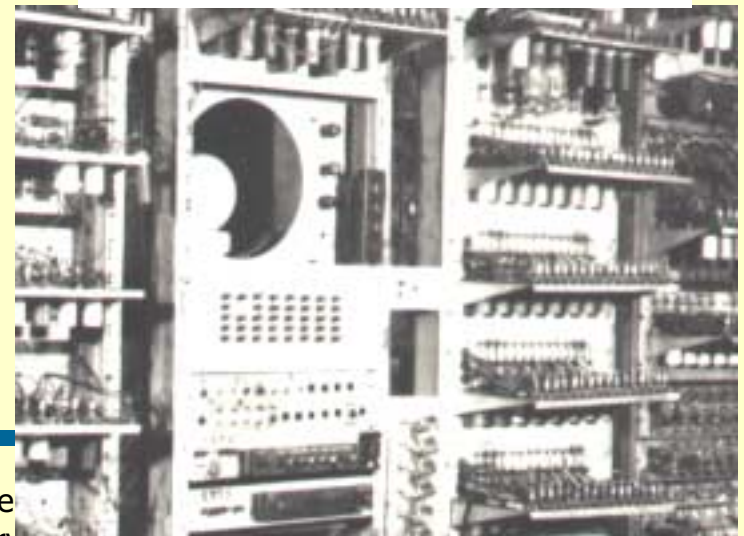
  

23	-a	
24	b <sub>1</sub>	

25	-	r <sub>a</sub>
26	-	-b <sub>1</sub>
27	-	b <sub>1</sub>

or 10100



# Manchester Computing serves



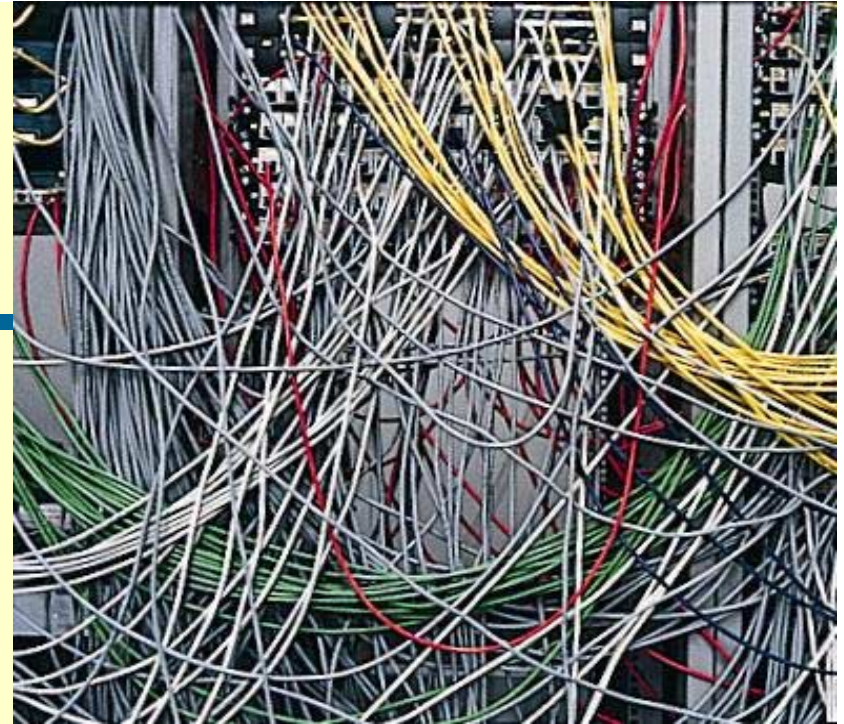
- University of Manchester
  - Administrative computing, academic computing, telecoms
- UK Academia
  - Supercomputing (CSAR)
  - Information & data services (MIMAS)
  - Major node in UK Academic Network
    - Managing agent for Net NorthWest
  - Used by HE, FE & RCs
- International
  - MIMAS
  - International AVS Centre
- Government, Commerce & Industry
  - Supercomputing
  - Networks and hosting
    - IFL
  - R&D



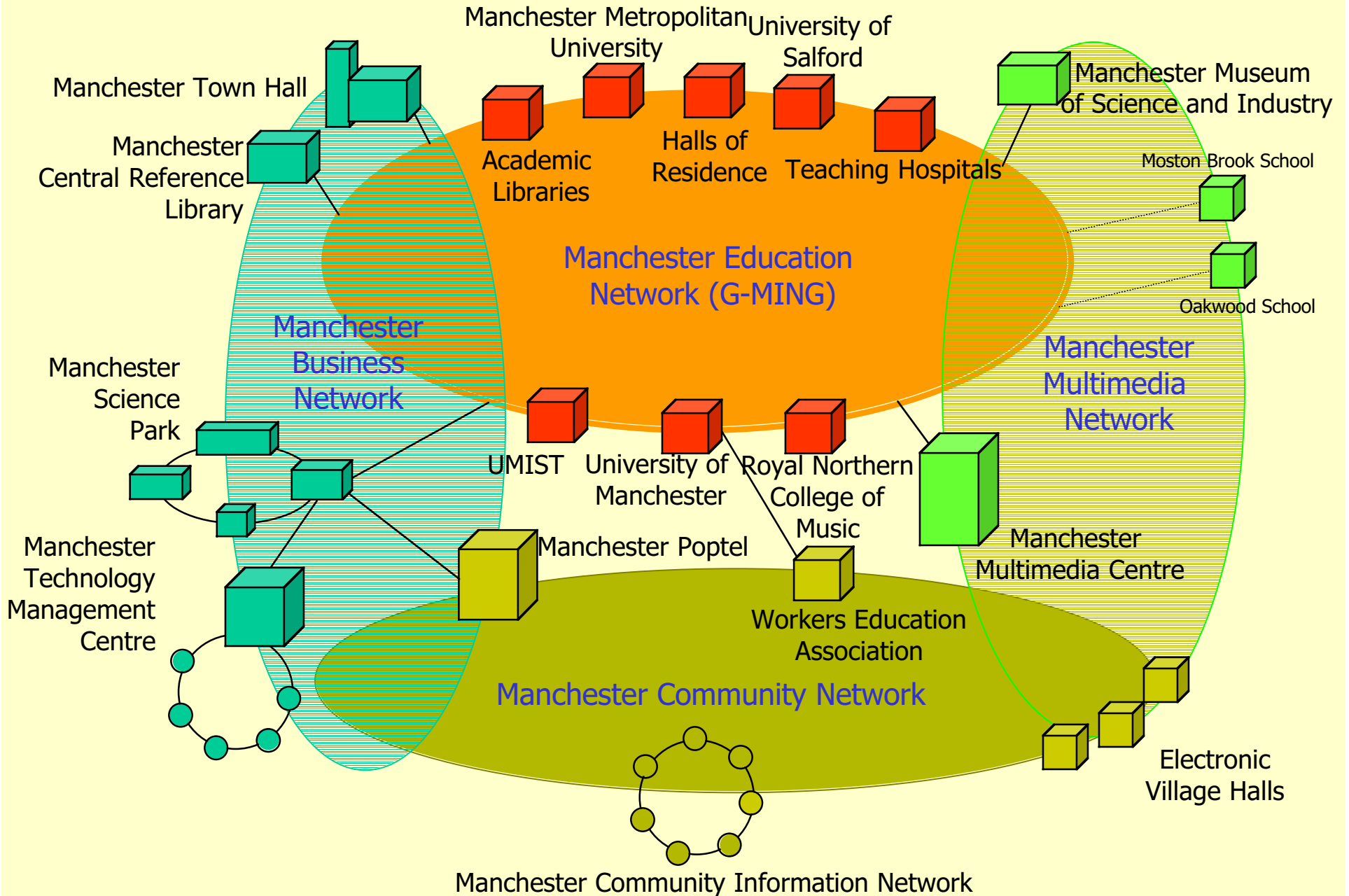
# Networking



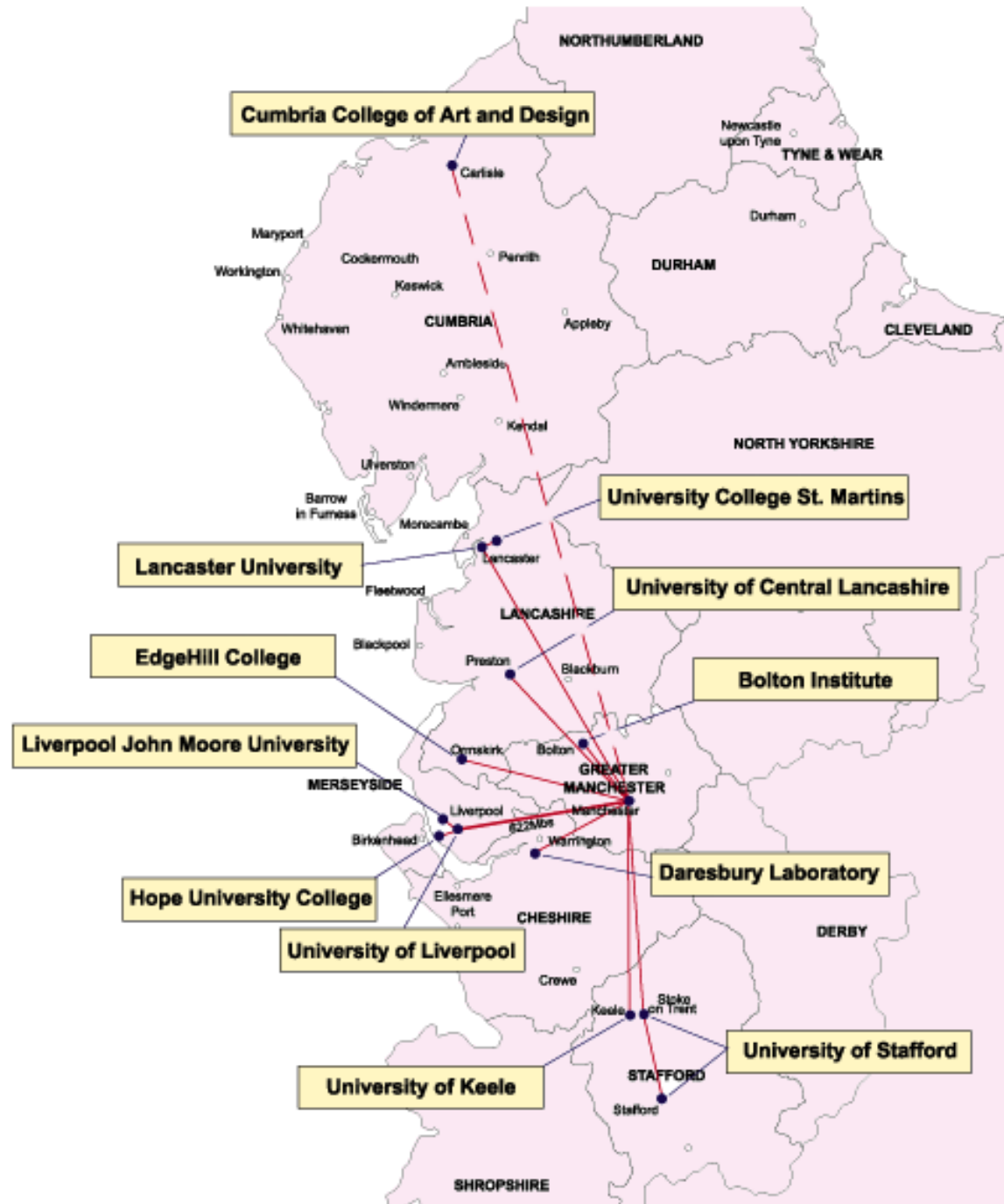
- Lead site for
  - G-MING
  - Network NorthWest (Cumbria to Keele)
  - JANET
  - SuperJANET
  - SJ4
- Own dial-up service
  - 3,000 subscribers



# Building a City Infostructure







# World Domination



# Supercomputing



- National HPC services continuously since 1972
- Flagship HPC Service for UK Academia & Commerce
  - University of Manchester
  - Computer Sciences Corporation
  - SGI
- Pay per use system
- Local HPC



# Supercomputers



- MIMAS
  - Sun E6500 24 PE (MIMAS), E4500, E4000 (JSTOR)
- CSAR
  - Cray T3E-1200E 816 PEs      Origin3000 512 PEs
  - Origin2000 128 PEs
  - Fujitsu VPP300 8 PEs      Origin300 16 PEs
  - SGI Intel IA-64 32 PEs      Compaq 16 PEs
- Manchester
  - IBM RS6000/SP 146 PEs
  - Beowolf cluster 204 Pentiums
  - Origin3000 16 PEs
  - Origin2000 : 44 PEs      8 PEs    16 PEs    40 PEs



# A Brief History of Supercomputing @ Manchester



Year	MFlops	Machine
1948	0.0007	Williams-Kilburn Baby
1972	12	CDC7600/ICL1906A
1977	12	CDC7600/ICL1904S
1983	192	CDC Cyber 205
1988	576	VP1200
1993	2,200	VPX 240/10
1998	0.7M	Cray 576 PE
2000	1M	Upgrade to 816 PE
2000	0.1M	128 PE SGI Origin 2000
2001	~0.5M	512 PE SGI Origin3000

Others  
Sun  
Cray CS6400  
Meiko (80PE)  
KSR  
IBM SP (146PE)  
Cray EL98  
Compaq  
Amdahl  
Fujitsu  
Digital

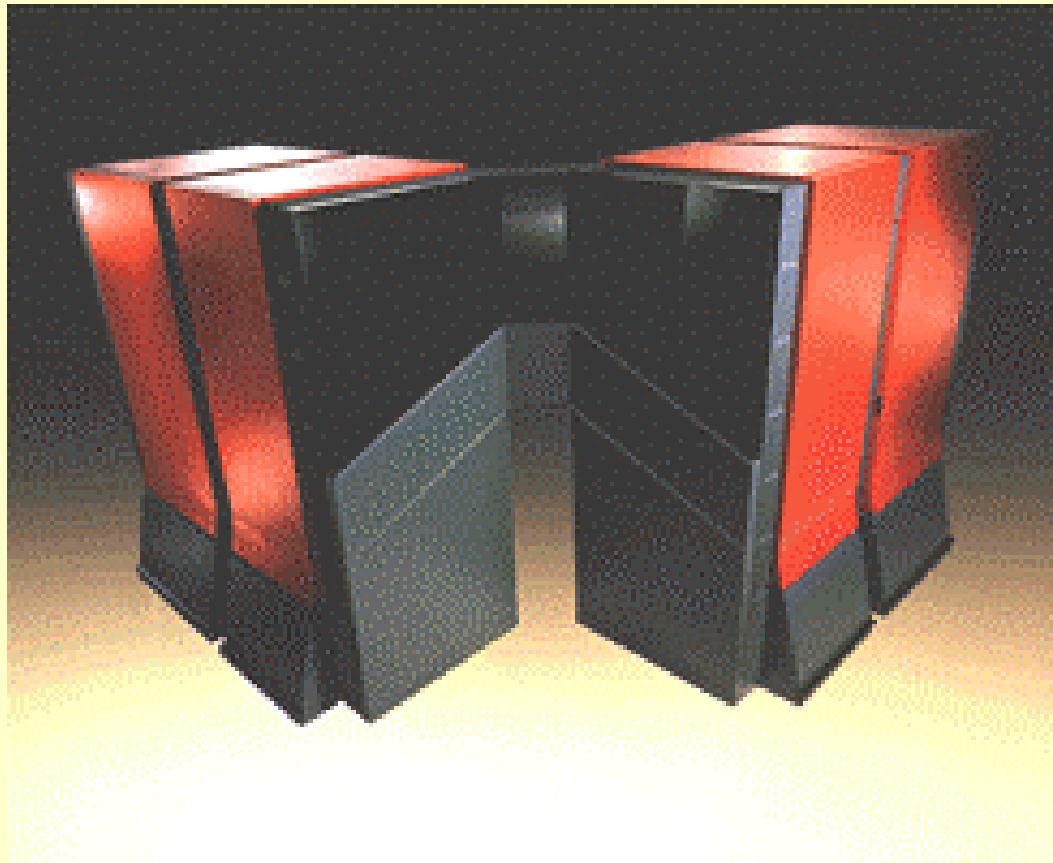


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# Guess the Supercomputer

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# 1



# 2





# 3



# 4



# 5



# 6



# 7



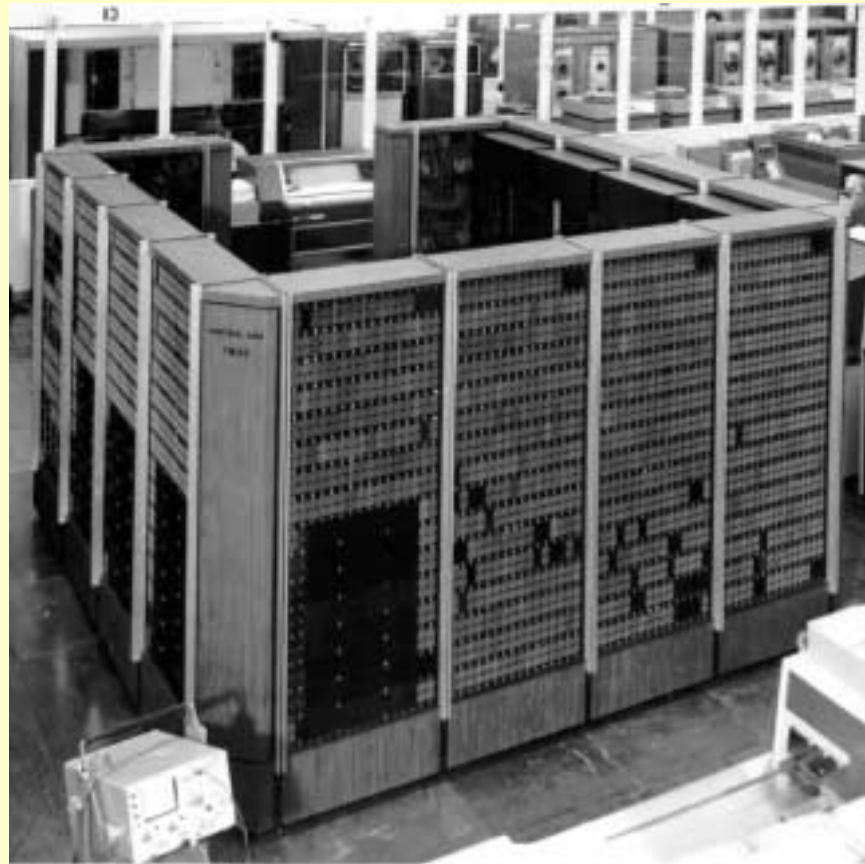
# 8



# 9



# 10



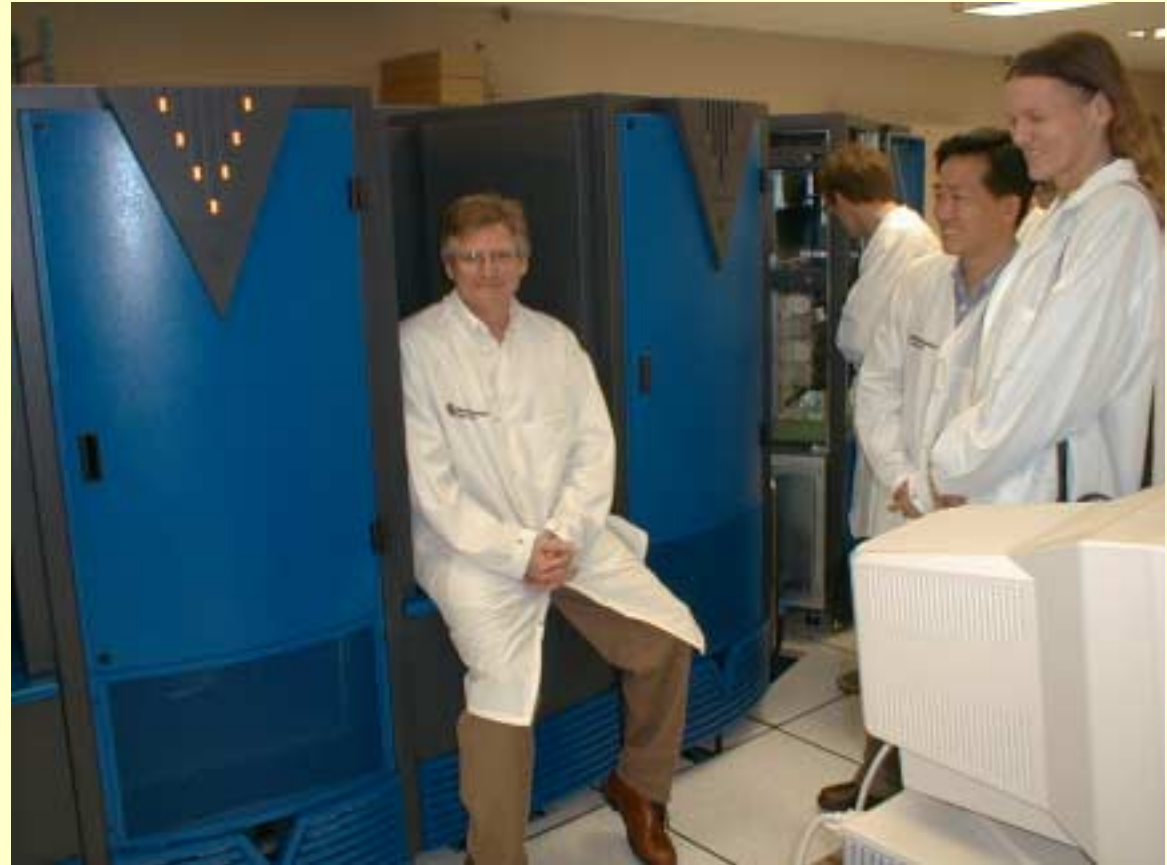


11

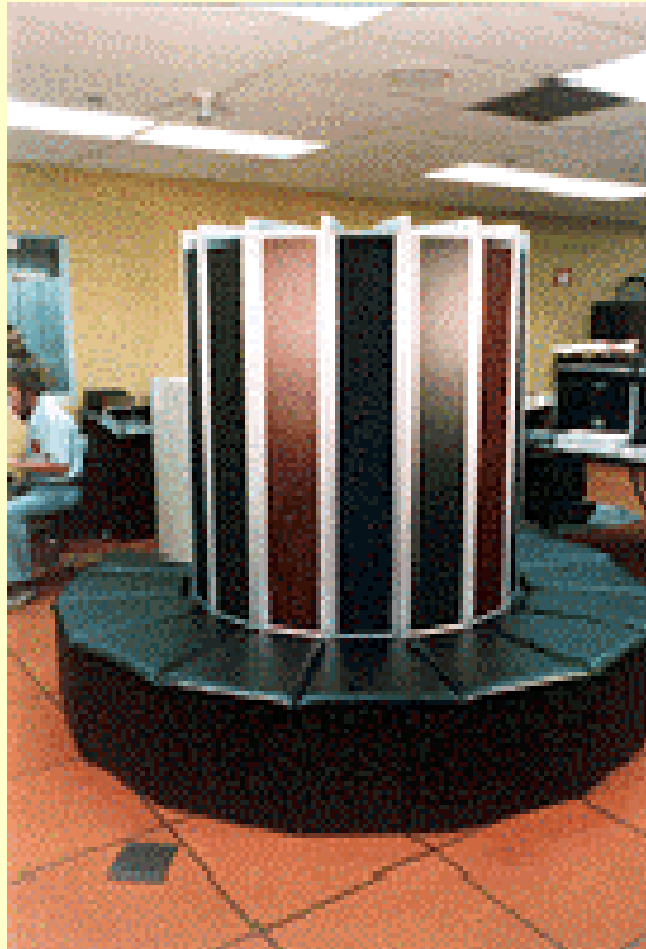


12

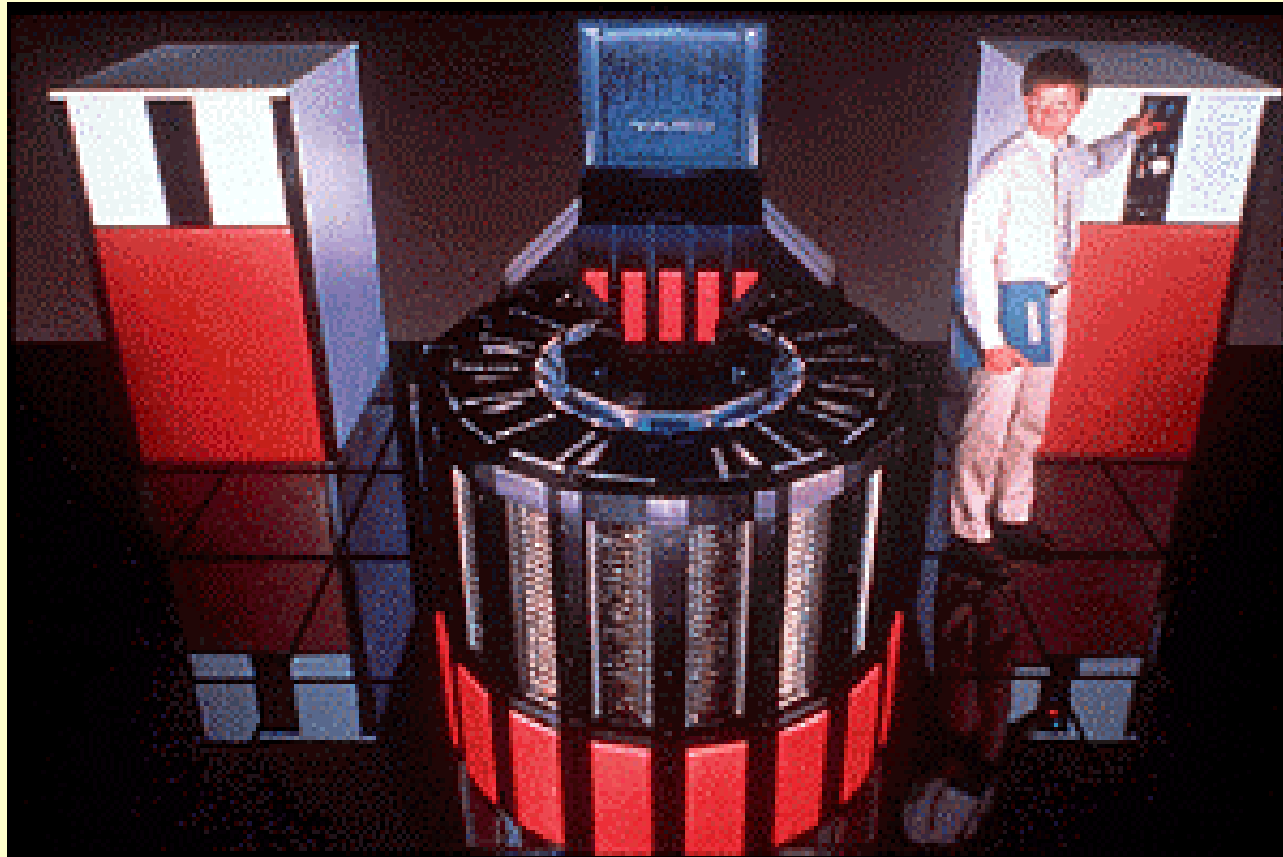
**Who is sitting down?**



# 13



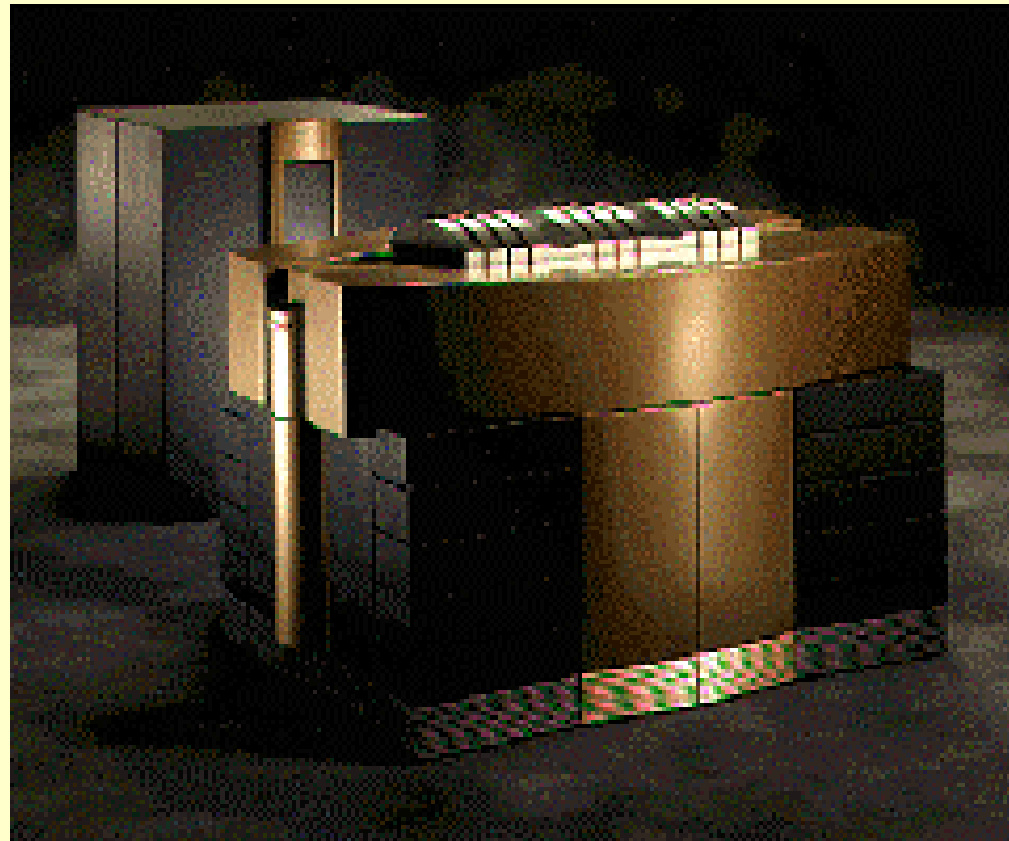
# 14



# 15



# 16



# 17



# 18



# 19





# 20



# 21



# 22



# 23



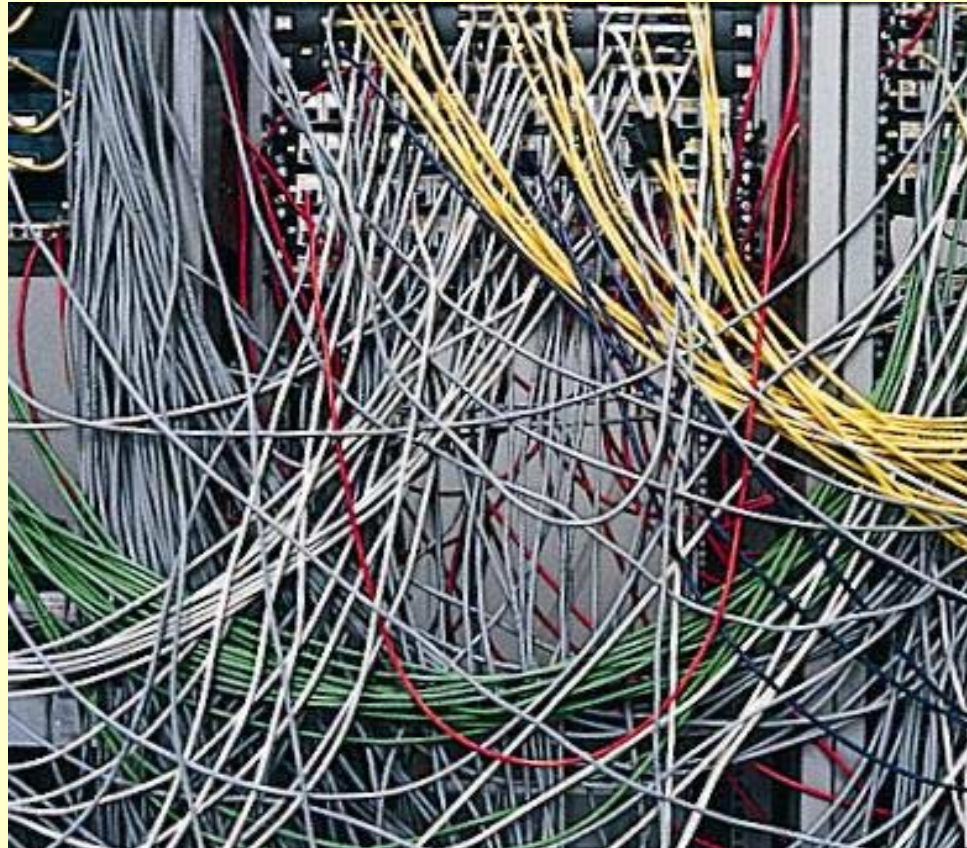
# 24



# 25 Name this Board



# 26 How Many Wires?





Welcome C



# Where?



You are STILL here!

Scotland

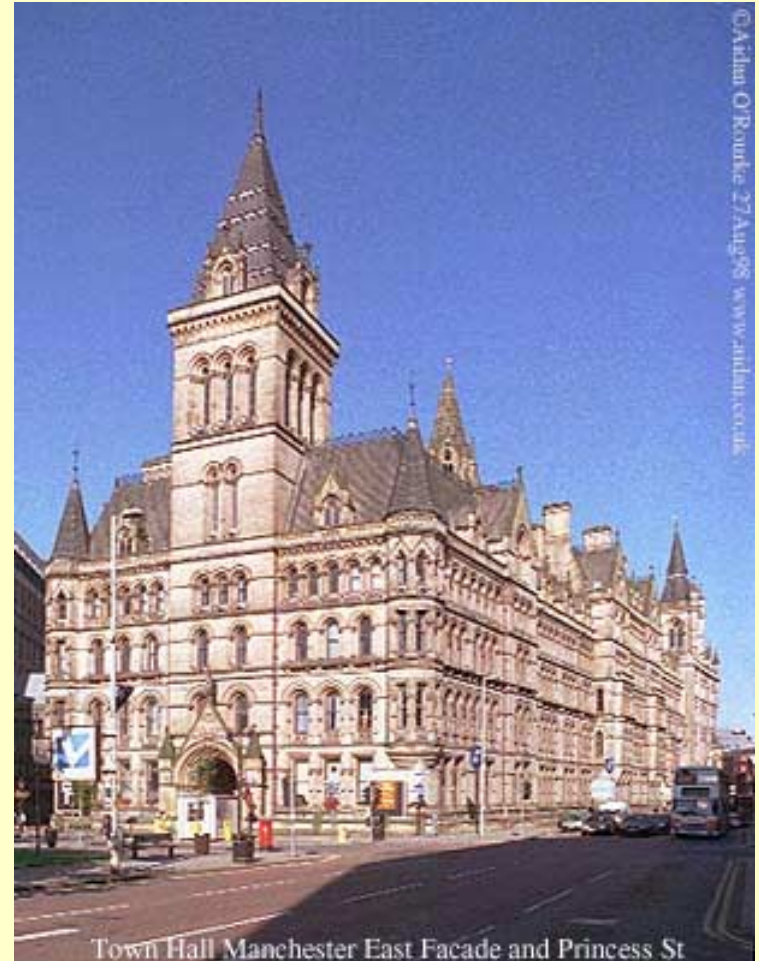


London

# Conference Venue



- Manchester Town Hall, City Centre
  - Grade II listed building
  - Built 1840
  - Famous Great Hall and State Rooms



Town Hall Manchester East Facade and Princess St

# Manchester Famous For



- Coronation Street & Granada TV
- Manchester Ship Canal
- First Railway station
- Rutherford
- John Dalton
- JRULM – Deansgate
- Two Football teams
  - Manchester City
  - ???
- Commonwealth Games 2002
- Cultural Centre of the UK

# Manchester's History



- Called 'Mancunium' by the Romans
  - Roman remains in several locations
- Market town in the Middle ages
- Grew to be a large city during the Industrial Revolution
- Manchester was the world centre for Cotton Spinning and trade in Cotton.
- It was once one of Britain's largest ports, even though its in 40 miles from the sea !

# Outside Manchester



- Too late Now!

















Welcome CUG 2002

Manchester Computing Europe's  
premier university computer service

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# Why Was Manchester Chosen?



- Funny accents
- Funny money
- Can't spell properly
- Play football
- Play cricket
- Drive on the wrong side of the road
- Only 5 TV channels
- Rains a lot
- Eat strange things: black pudding, tripe



# Summary: Why Manchester?



- Europe's premier university computer service
- Important site in the history of computing
  - See the 'Baby' in the Museum of Science and Industry
- Large vibrant city (best nightlife in the UK)
  - Theatres / Cinemas - including IMAX, Lowry, Bridgewater
- May is a wonderful month in the area:
  - long days, wild flowers, particularly in Peak District,
- Free Beer
- Lots of good Curry !

# Conference Highlights



- Monday: SGI reception  
Whitworth Art Gallery
- Wednesday:
  - Lord Mayor
  - Dr J Taylor, Director General of the Research Councils
  - David Burridge, Director of ECMWF
  - Daniel Reed, Director of NCSA
  - CUG Night out at Tatton Park
- Thursday: Cray Reception Science Museum, Castlefield







- 'Email' Room is Tower Room, Wireless LAN
- You've had or missed:
  - 1 Lord Mayor and 3 Directors
- Still to come:
  - 1 Reception
  - 2 corporate sessions
  - 8 parallel sessions
  - 30 somethings
  - 2 somethings
  - 8 something else



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USA	UK word to use
Soccer	27
Football	28
French fries	29
Potato chips	30
Private school	31
Area code	32
Mall	33



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USA	UK word to use
Fag	34
Eraser	35
Elevator	36
Sidewalk	37
Trunk (of car)	38
Fanny	39
Butt	40
Bathroom	41



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USA	UK word to use
42	Toilet
43	Cash point, hole in the wall
44	Lager
45	United Kingdom
46	Main course
47	Ground floor
48	Braces

# Things Not to Say



- You speak with a funny accent
- Anything about the results of
  - Premier league
  - European Champions league
- Can you organise another conference?

# Things to Say



- May I buy you a beer
- Terry is a wonderful person & a credit to the human race
- May I buy you another beer

# Acknowledgements



- CUG Board
- University of Manchester
- CRAY, SGI
- Time Computers, Danwood Group
- And you for attending





## Welcome to CUG SUMMIT 2002 AGAIN

You won't be  
disappointed!



computing Europe's  
city computer service

