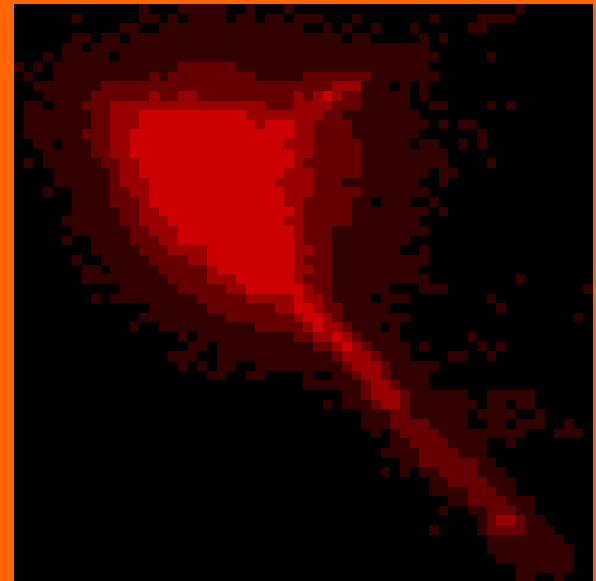


# 10 Megatrends of the IT-Industry

**Dr.-Ing. Artur P. Schmidt,**  
**Writer and Management**  
**Consultant, aseantic ag,**  
**IT-Update, ZFU,**  
**11./12. December**  
**2001, Zurich**



## Driving Forces

Moore's Law

Gilder's Law

Metcalfe's Law

Coase's Law

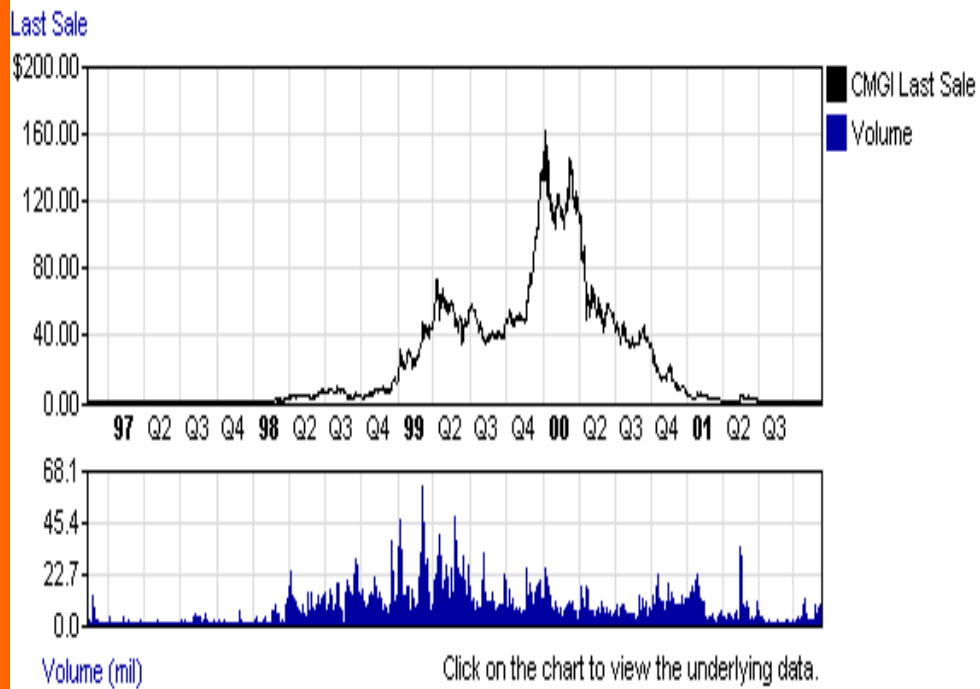
Ashby's Law





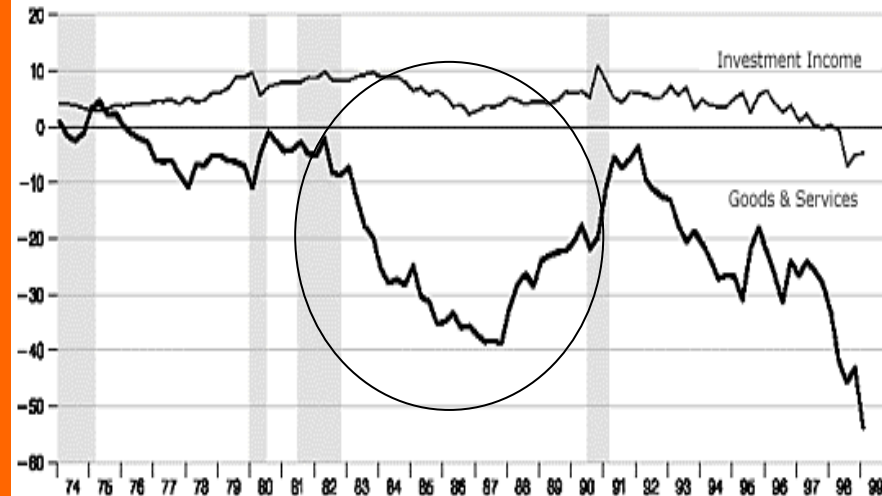
## Internet-Depression

Boom and Bust  
of the technology market.



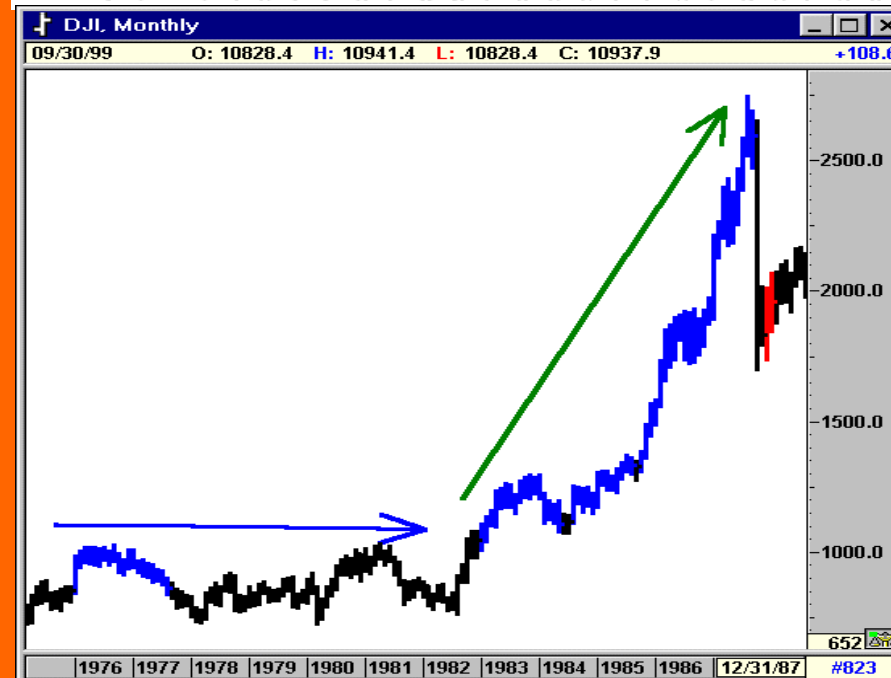
### Trade and Investment Balances

Billions of Dollars, Quarterly Rate

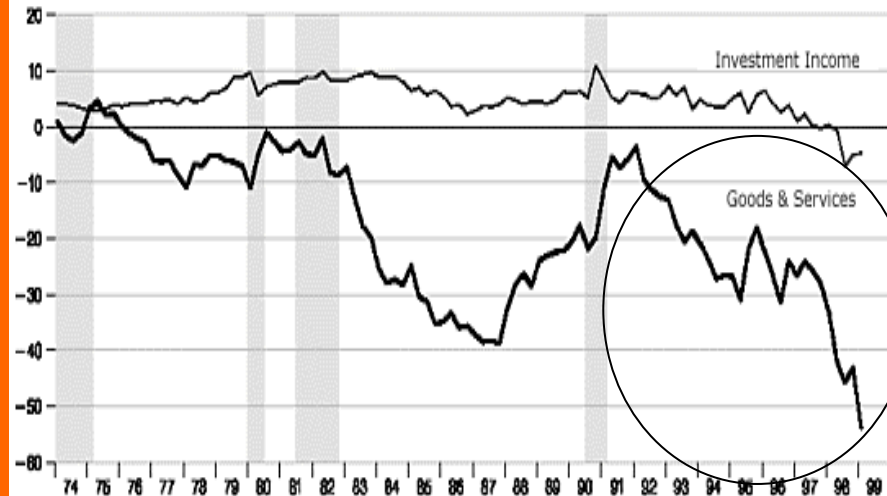


## Boom Cycles

Trade and Investment Balances:  
1980s

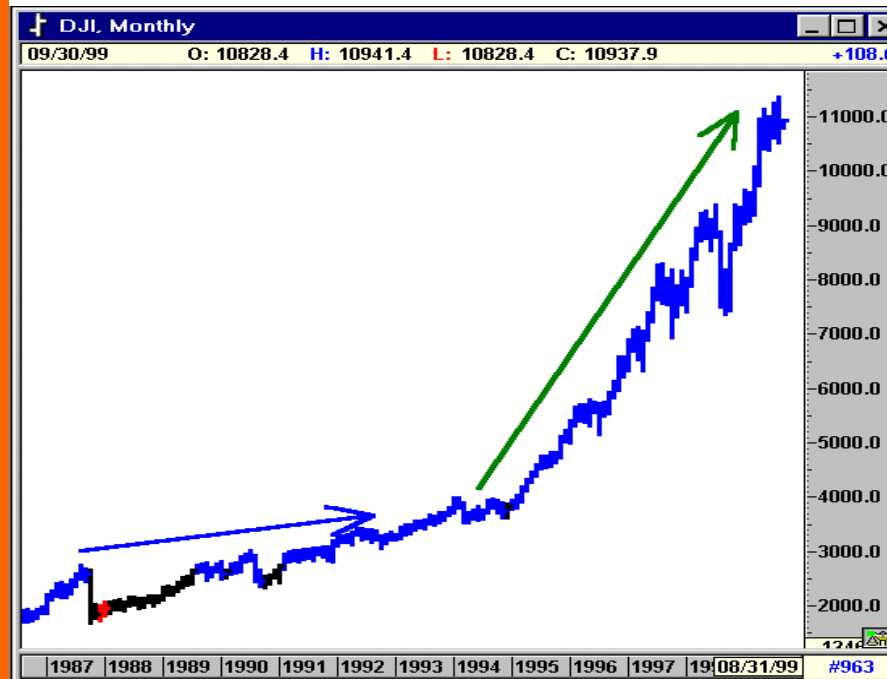


### Trade and Investment Balances Billions of Dollars, Quarterly Rate

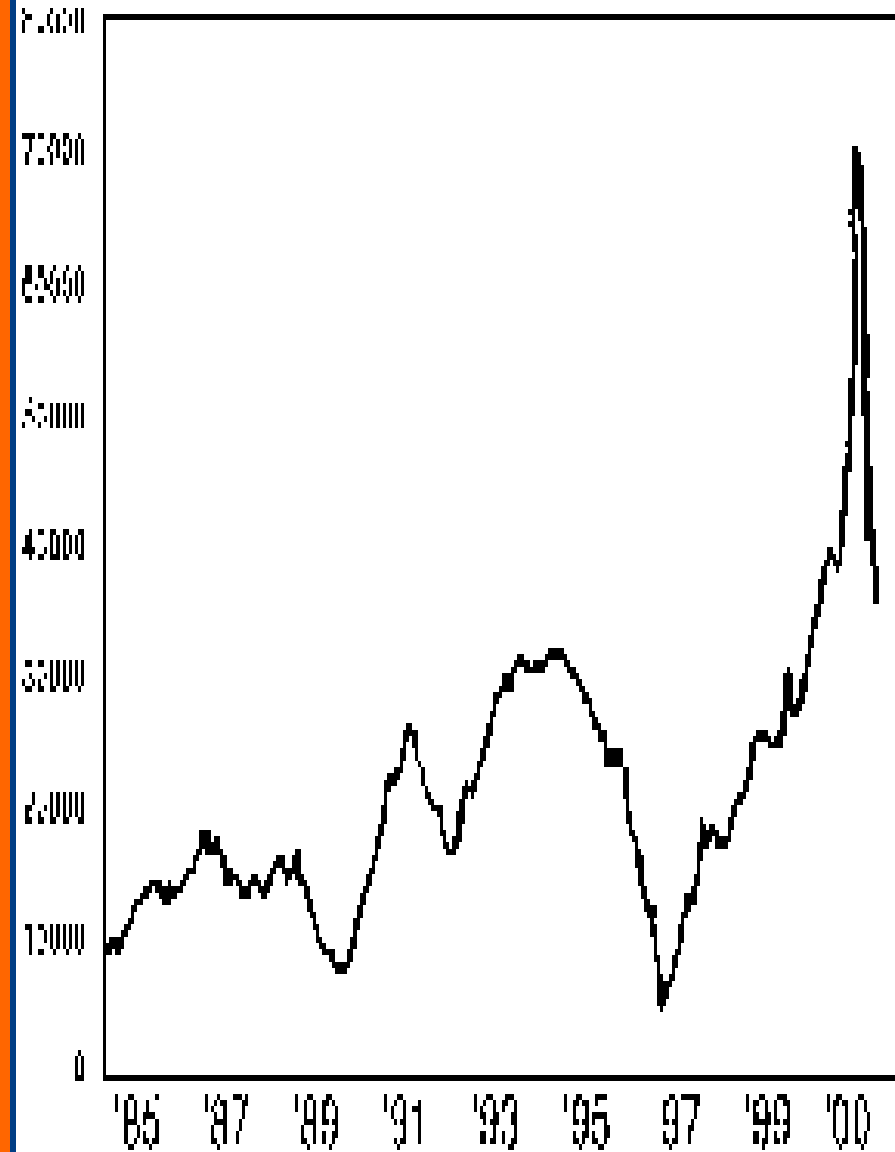


## Boom Cycles

## Trade and Investment Balances: 1990s



# Money Supply Rate of Change

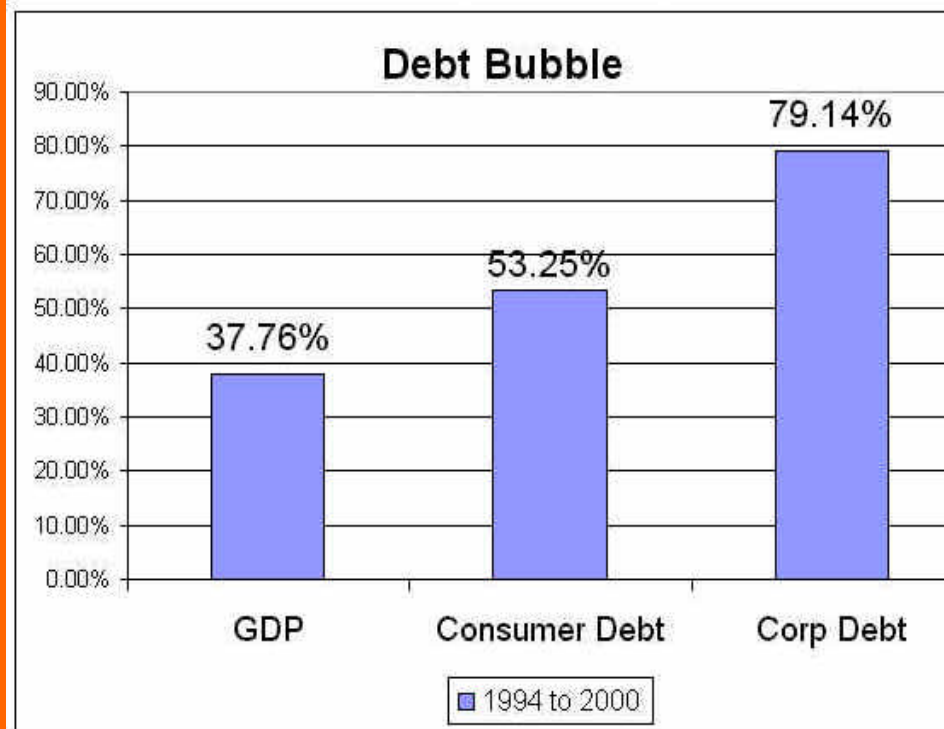
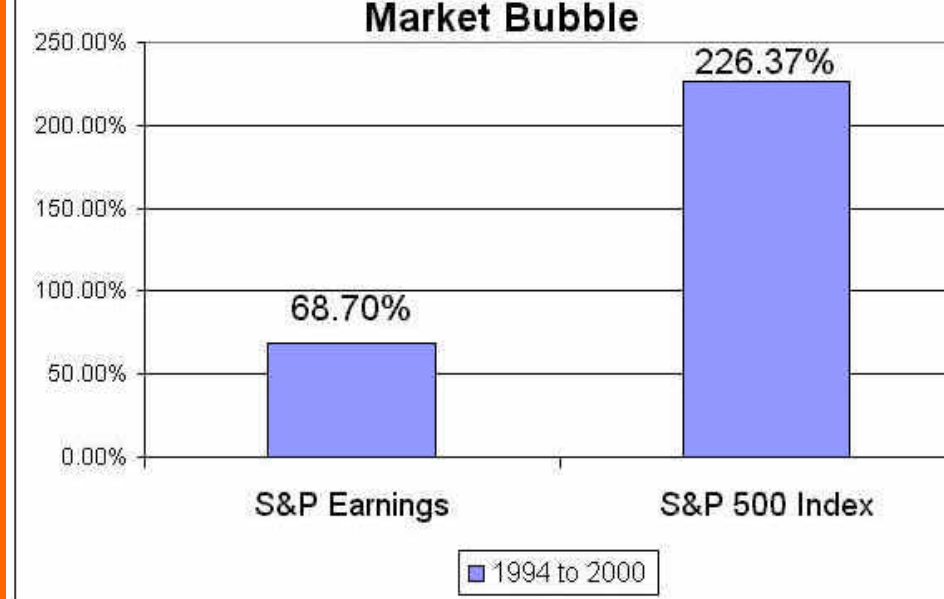


## Money Supply Bubble

Y2K-Problem created to much liquidity in the market.

## Debt Bubble

The corporate debt problem could increase and cause a deflation.

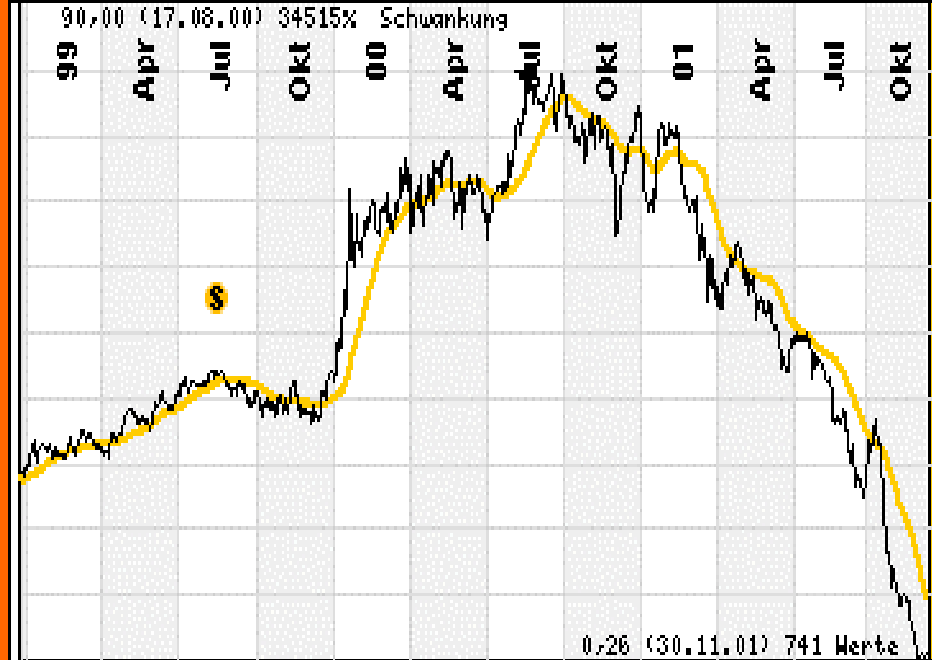


Intraday 3 Monate 6 Monate 1 Jahr 3 Jahre

comdirect

ENRON CORP

USD



— Kursverlauf

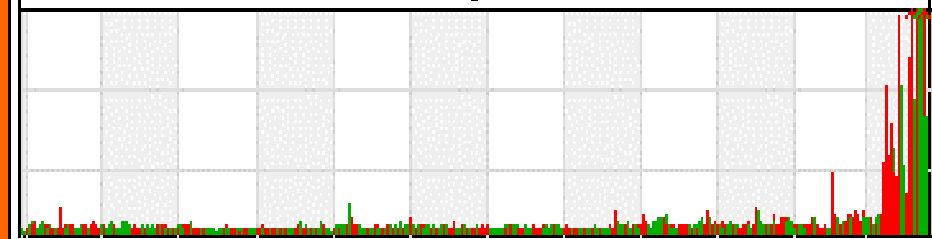
— 38-Tage Durchschnitt

letzter Kurs vom 10.12.01

Stückvolumen

— Steigende Kurse

— Fallende Kurse

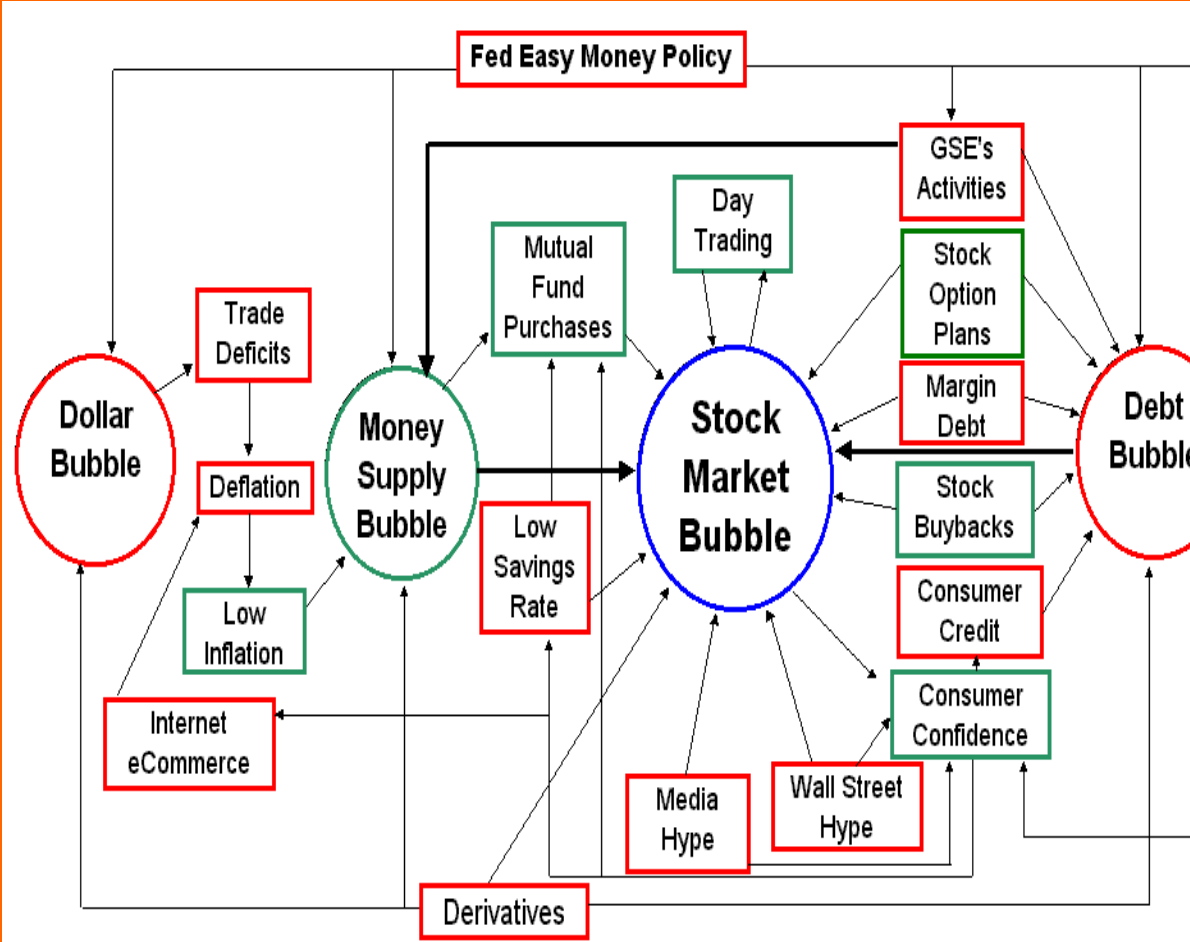


Debt Bubble

The Enron collapse.

# Bubble Economy

Cybernetic Systems tend to have positive and negative feedback loops.



## Megatrend 1: The PC is still alive!

“Since the death of the PC has been predicted nearly 250 million PC’s have been sold.”

Michael Dell, Las Vegas 2000



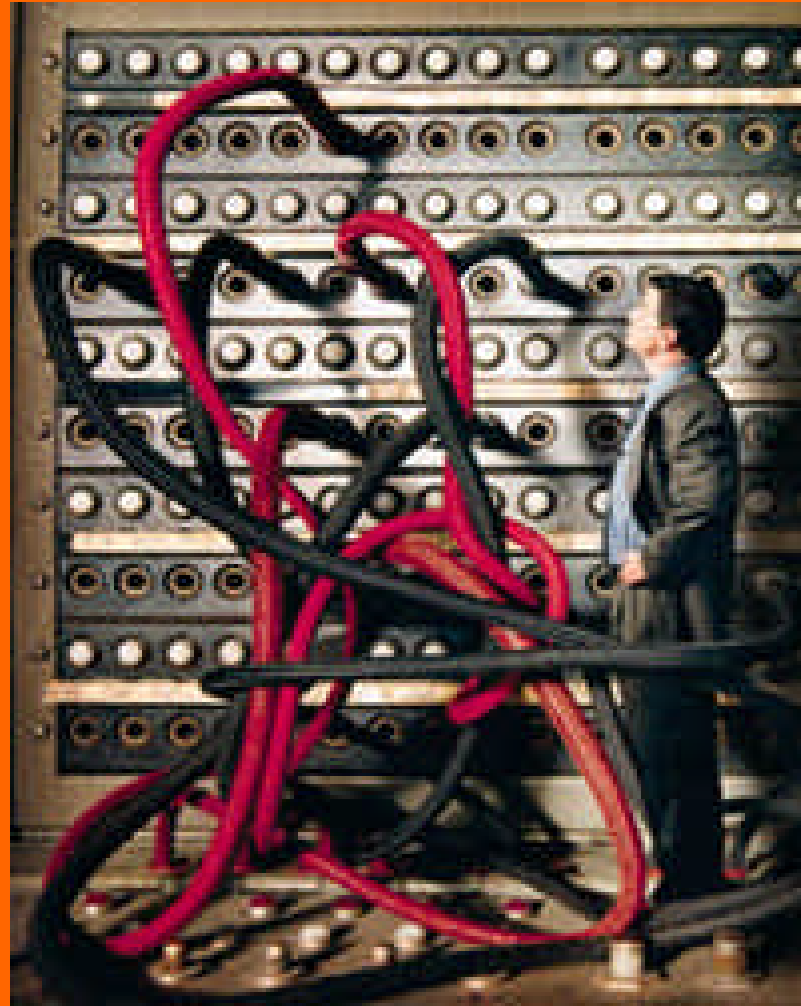
## Megatrend 1: The PC is still alive!

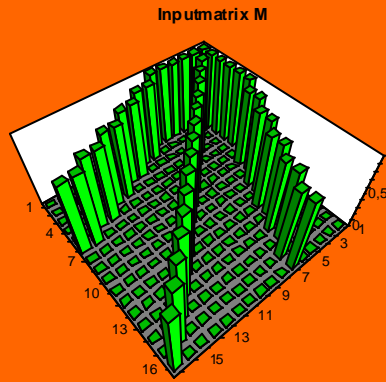
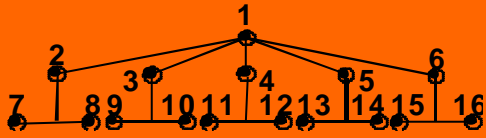
PCs are content collecting machines which need to communicate effectively like R2D2 with C3PO.



## Megatrend 2: Peer-to-Peer

Intranets are very often producing an information overflow.



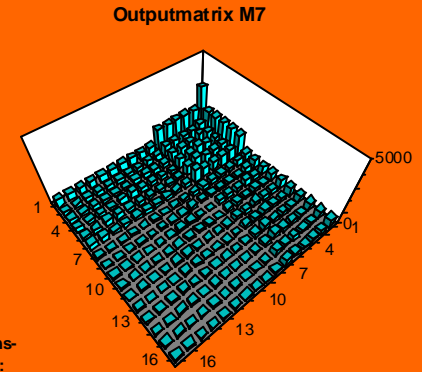


Modell:  
Hierarchie\_3

Input  
Total  
4,6

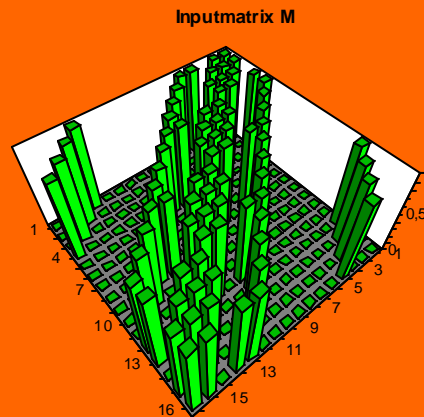
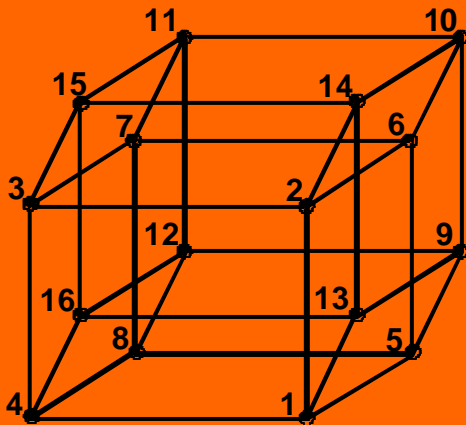
Output  
Total  
97,45t

Kommunikations-  
Potential in %:  
2,03



## Megatrend 2: Peer-to-Peer

In the future the decisive power of any organization will be the circulation speed of knowledge.

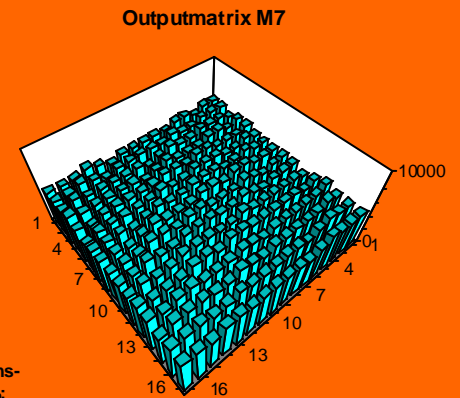


Modell:  
HYPER

Input  
Total  
80

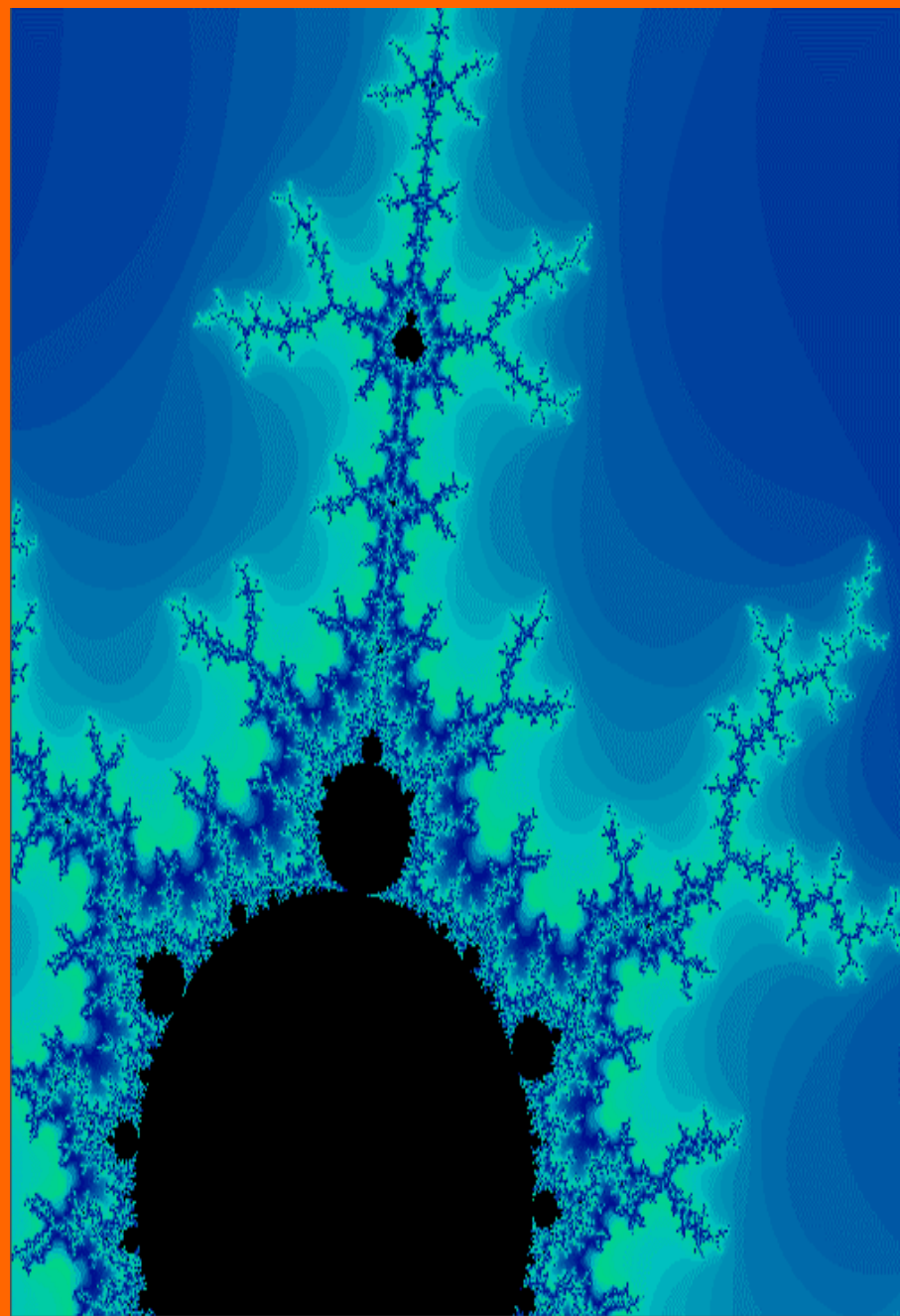
Output  
Total  
1.250,00

Kommunikations-  
Potential in %:  
26,7t



## Megatrend 3: The GRID – the next-Gen Internet?

“The Internet is a fractal”  
Tim Berners-Lee



## Megatrend 3: The GRID – the next-Gen Internet?

“The Grid”, M.C. Escher

The Grid may give birth to a global file-swapping network or a members-only citadel for moneyed institutions.

On future of the GRID is Distributed Computing: The ability to aggregate the unused processing power of individual desktop PCs and put it to work on subdivided pieces of a large computing task.



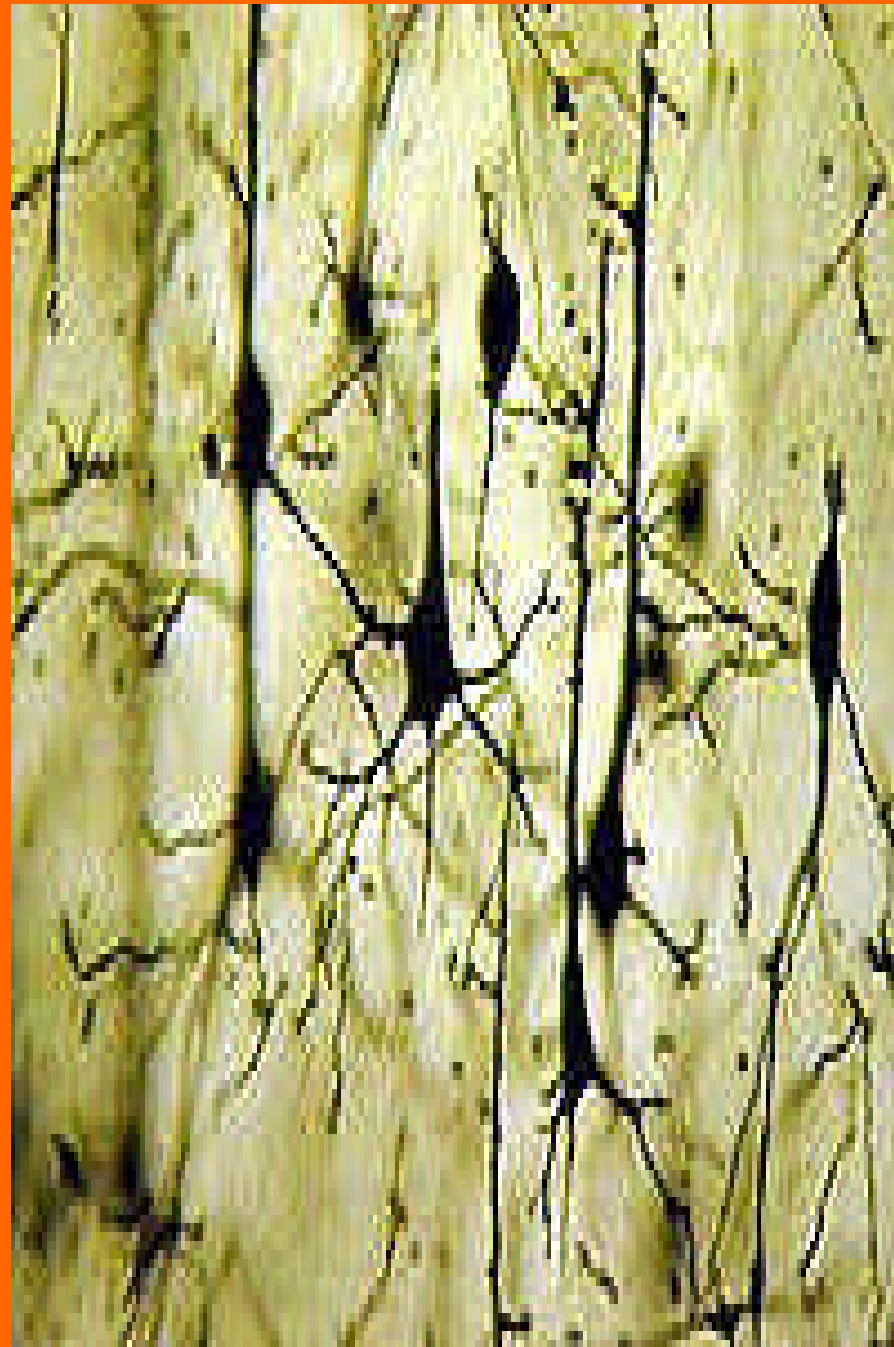
## Megatrend 4: Content Management

Content Management is more than collecting and organizing information. It's the most important tool to create knowledge in our brains and in organizations.



## Megatrend 4: Content Management

The management of digital assets is only efficient if we are able to construct a functioning hub and spoke system of information.

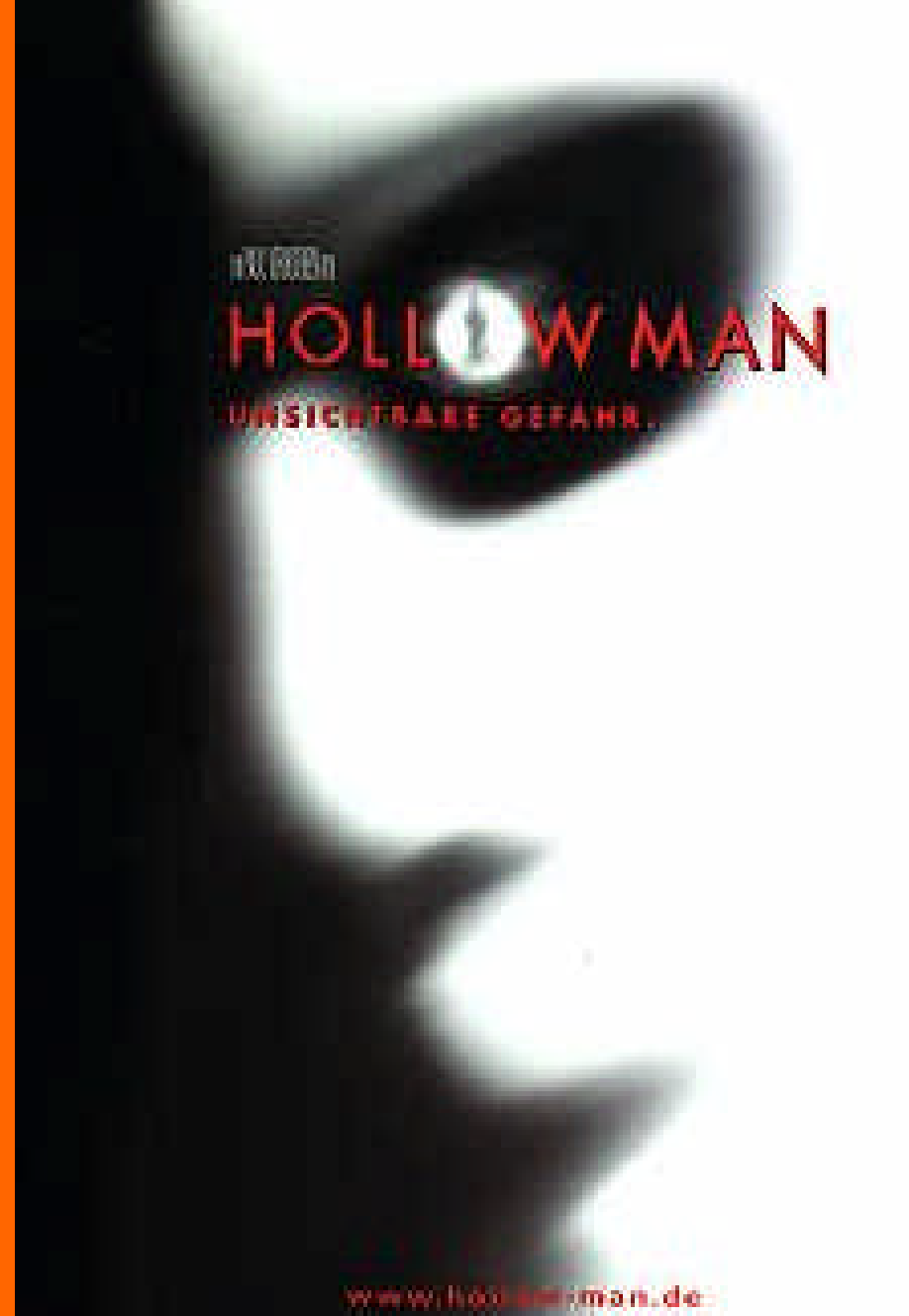


## Megatrend 5: Ubiquitous Computing

“Ubiquitous computing has as its goal the enhancing computer use by making many computers available throughout the physical environment, but making them effectively invisible to the user.”

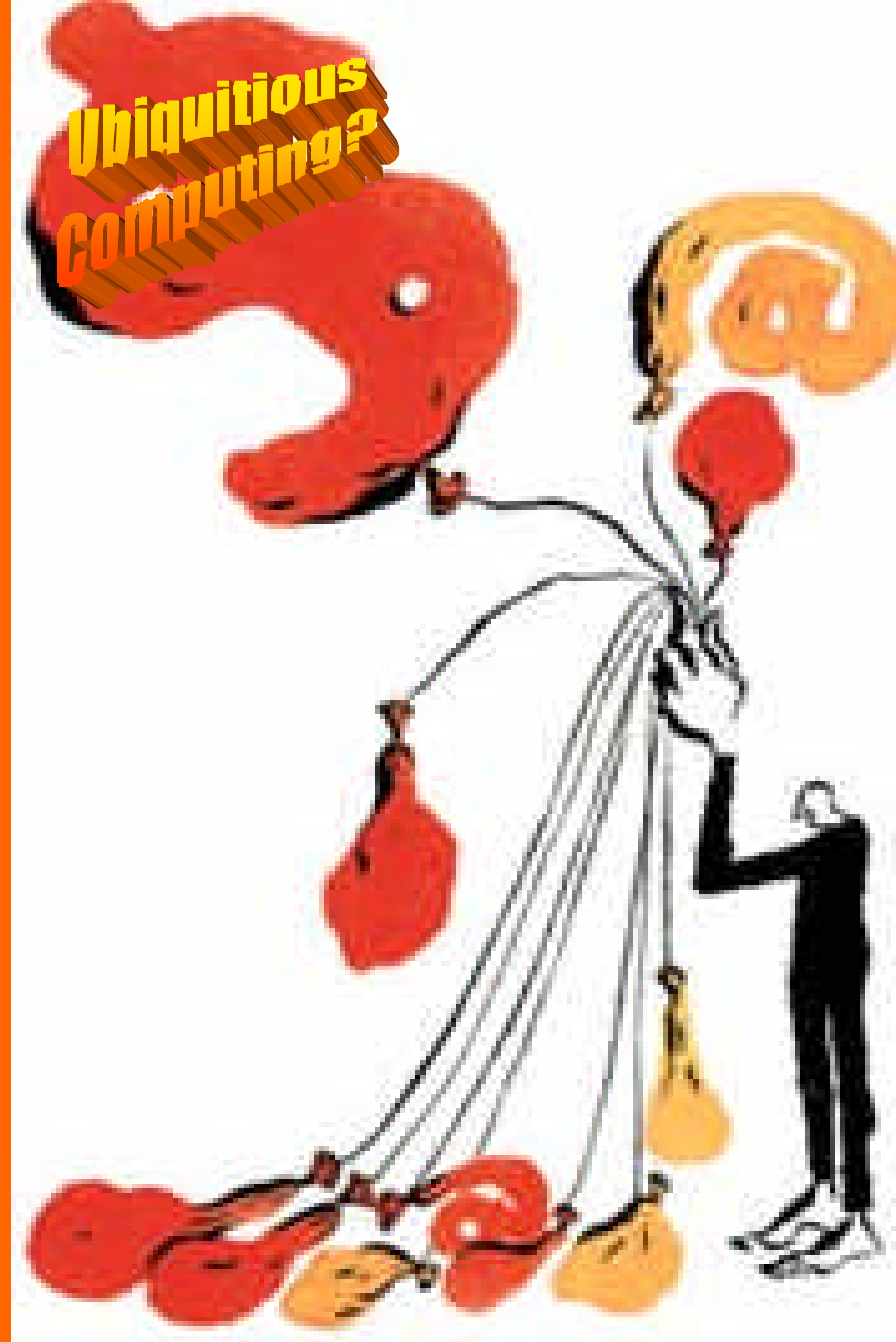
Mark Weiser, 1993

Holographic images are an ubiquitous type of storage.



## Megatrend 5: Ubiquitous Computing

Where is the killer app of the future? Most internet balloons where only filled with hot air not with profitable products or services.



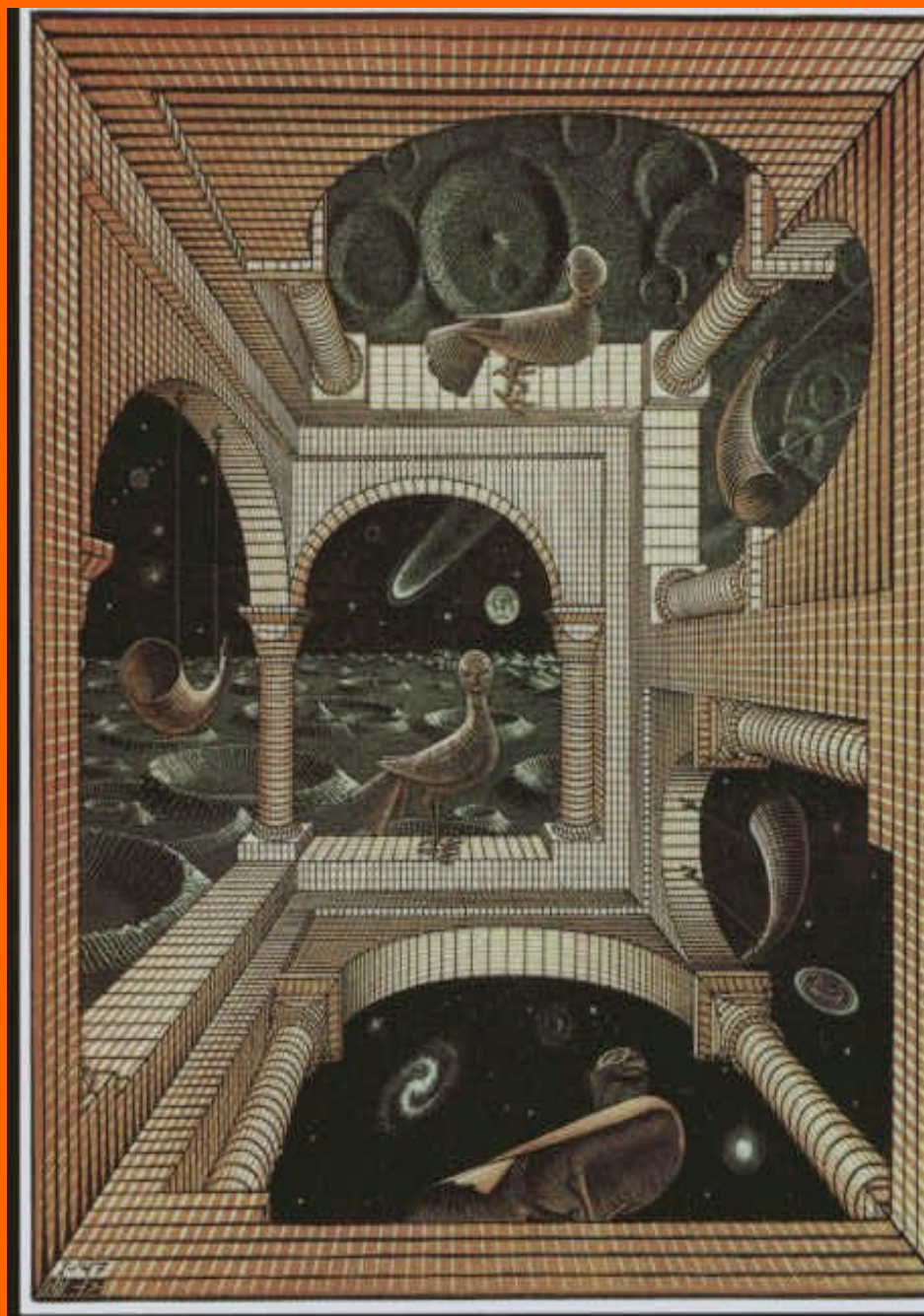
## Megatrend 6: Augmented Reality; Parallelity of real and virtual worlds

In Augmented Reality, the user can see the real world around him, with computer graphics superimposed or composited with the real world. Instead of replacing the real world, we supplement it. Ideally, it would seem to the user that the real and virtual objects coexisted.



**Megatrend 6: Augmented Reality;  
Parallelity of real and  
virtual worlds**

“The Other World”,  
M.C. Escher



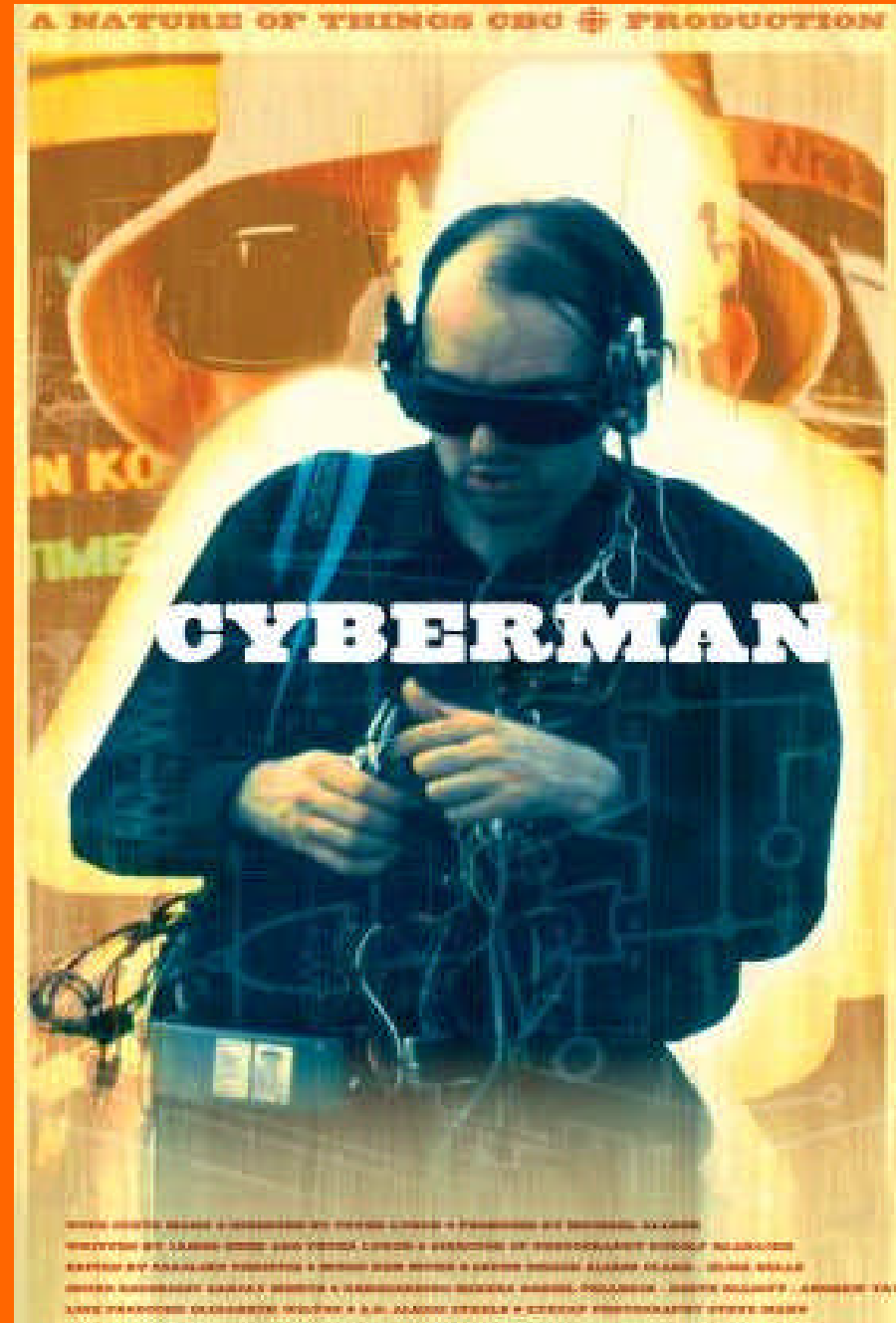
## Megatrend 7: B2B2B2B to whatever?

In cybernetic markets the volatility is increased to a maximum. The results are millisecond bankruptcies. The question of to b or not to b forces companies to create survival strategies.



## Megatrend 7: B2B2B2B to whatever?

Business enters the body of the manager. B2B of the next generation will be M2M which can be as well mobile to mobile, man to man, machine to machine or man to machine connections.



## Megatrend 8: Bluetooth – Killer Application for UMTS

Every technology that needs to much time to infiltrate the market is under high risk of being substituted by another one.



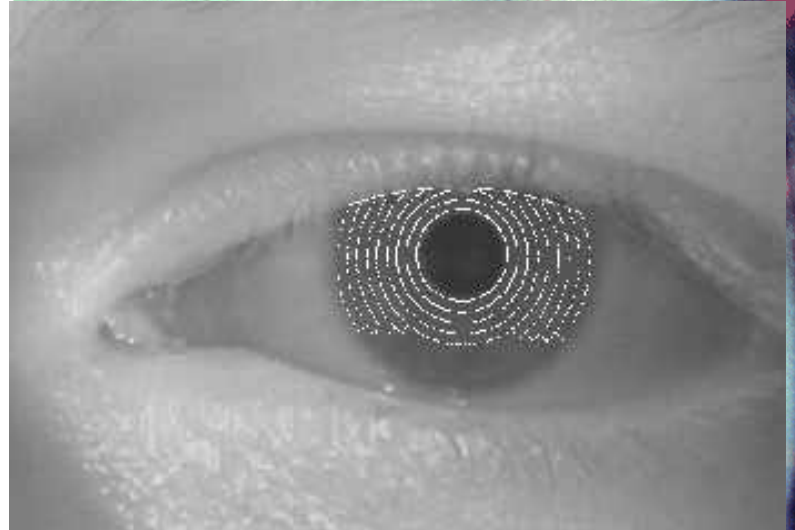
## Megatrend 8: Bluetooth – Killer Application for UMTS

Wireless connections make the life easier. Bluetooth products will provide links between mobile computers, mobile phones and other portable handheld devices, and connectivity to the Internet.



## Megatrend 9: Is the body your password?

US-based research firm International Biometric Group predicts that the worldwide biometric market will grow from \$US58.4 million in 1999 to \$US594 million by 2003.



## Megatrend 9: Is the body your password?

If accuracy rates don't increase, the number of potential suspects will create a control chaos.



# HARRISON FORD **BLADE RUNNER**



## Megatrend 10: Life Science

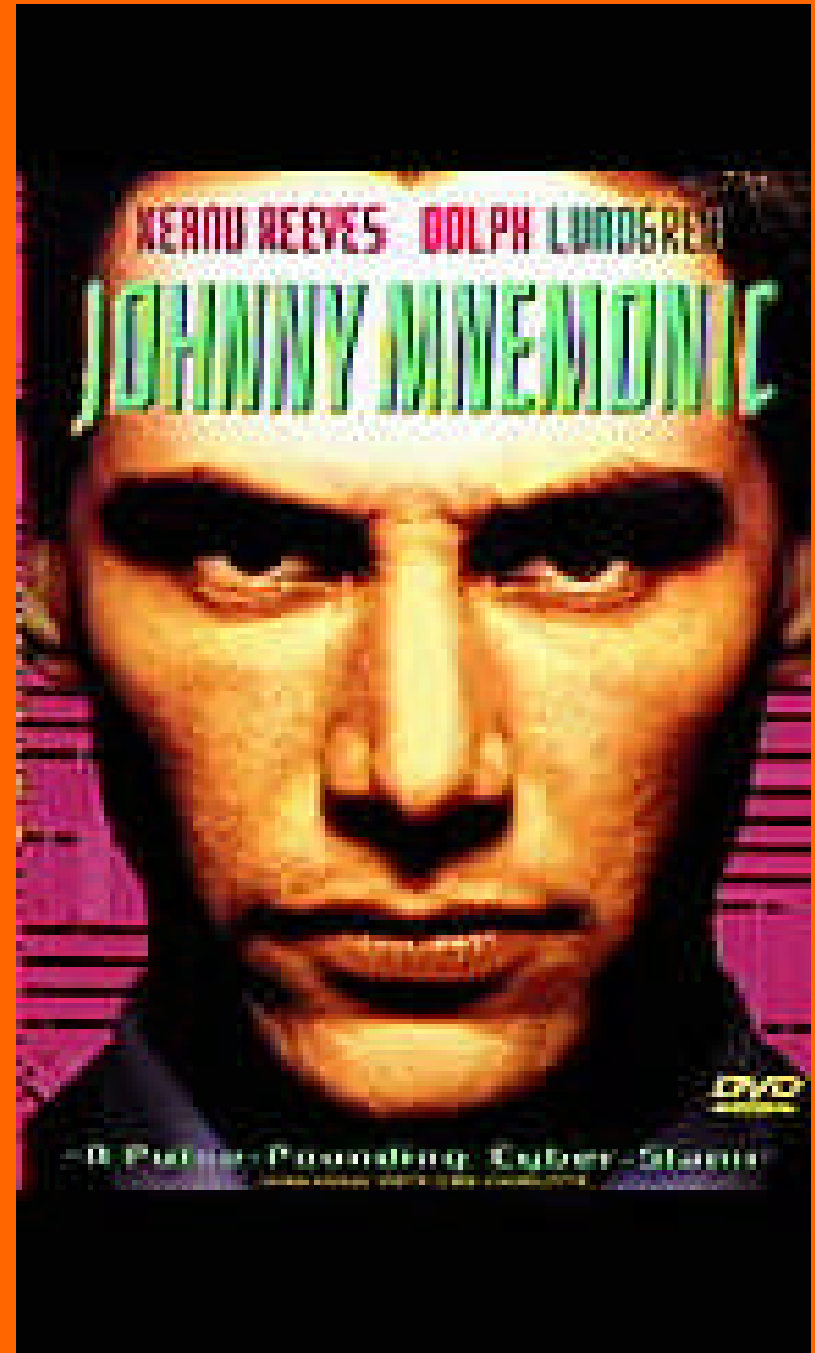
The new technology that can affect future generations is genetic engineering, a technology based on the artificial manipulation and transfer of genetic material. Genetic engineering can apply to any kind of living organism from microorganisms to humans.

How can we decide in the future who is real and who is the clone? (Blade Runner, 1992)



## Megatrend 10: Life Science

Biochips in the brain?: In the 21st century, information is the ultimate commodity. Professionals like Johnny who offer the ultimate in security and confidentiality transport huge amounts of data with their brain.



## Megatrend “Bush Administration”:

After the WTC-Collapse, the freedom of all world citizens is under attack but not by terrorists alone also by politicians.



*Magnet Classic*



GEORGE ORWELL



## Megatrend “Bush Administration”:

Is the matrix our future?  
Which pill do you want:  
the red one or the blue one?

