

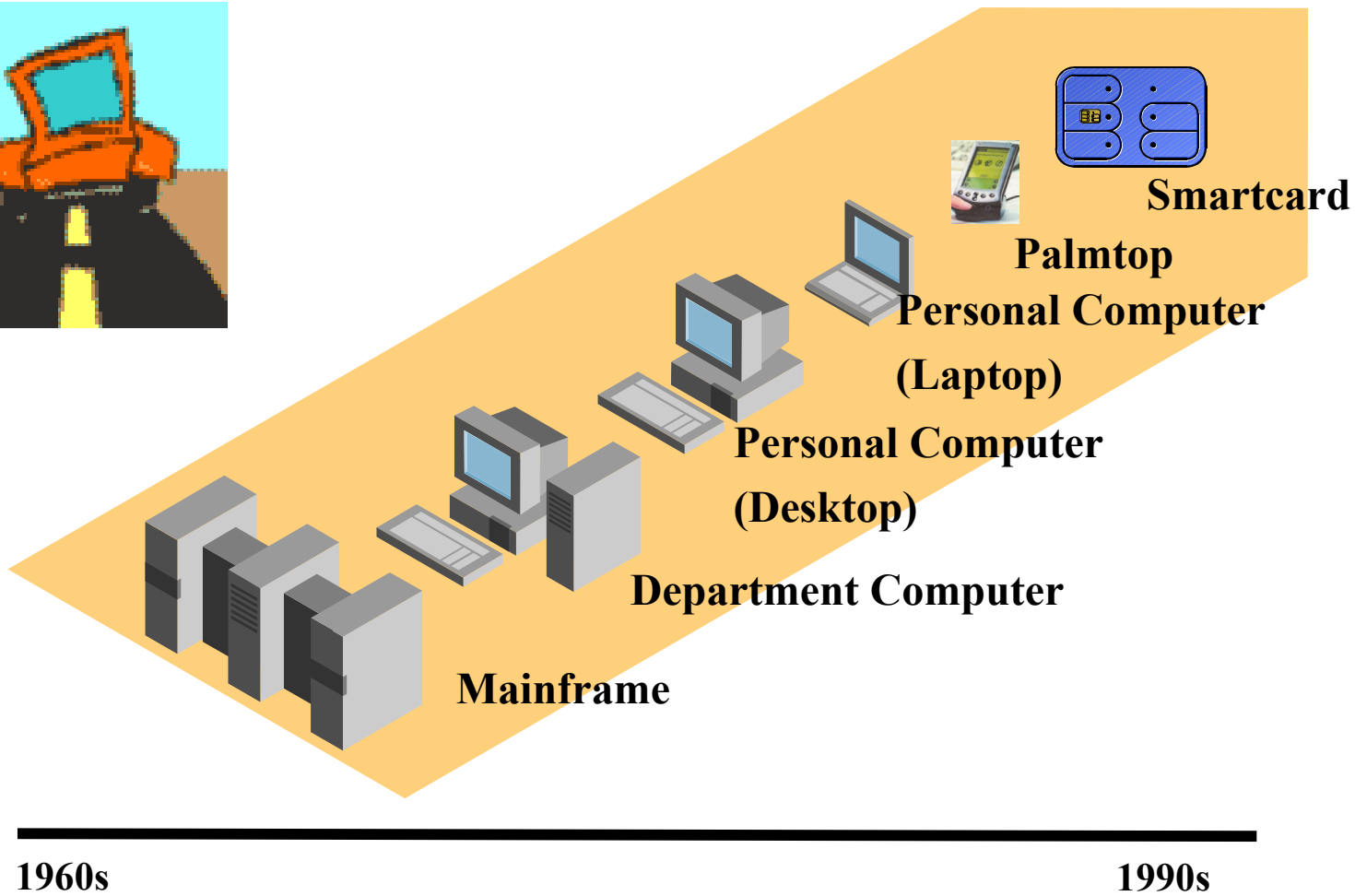
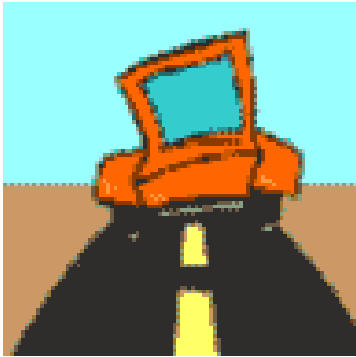


# **“eEurope Smart Card Charter (eESC) – Background and Objectives”**

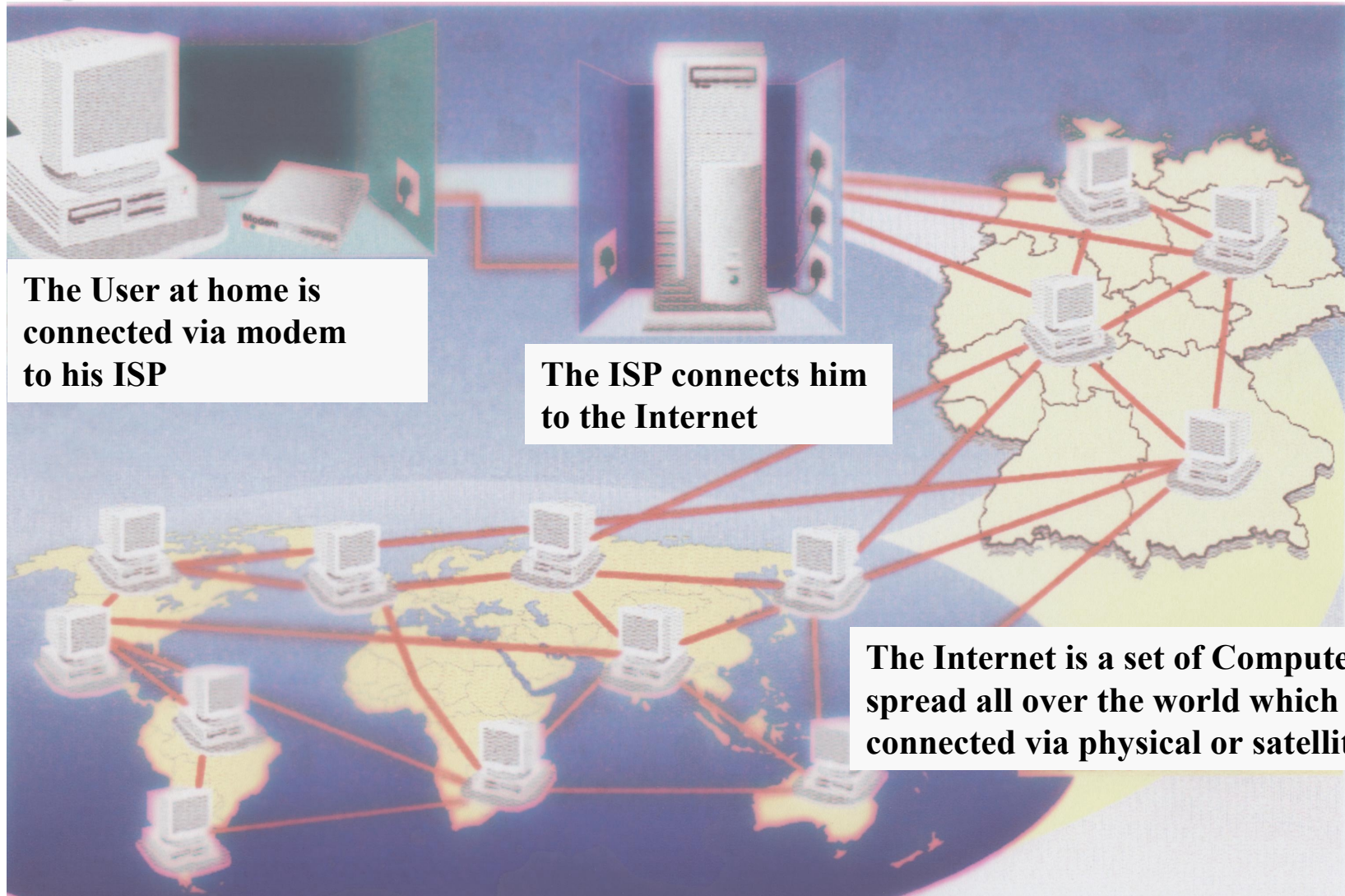
Dr.-Ing. Lutz Martiny  
Co-Chairman eEurope Smart Cards  
Chairman Eurosmart



# The IT (R)Evolution

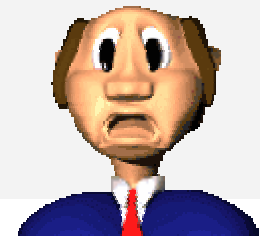
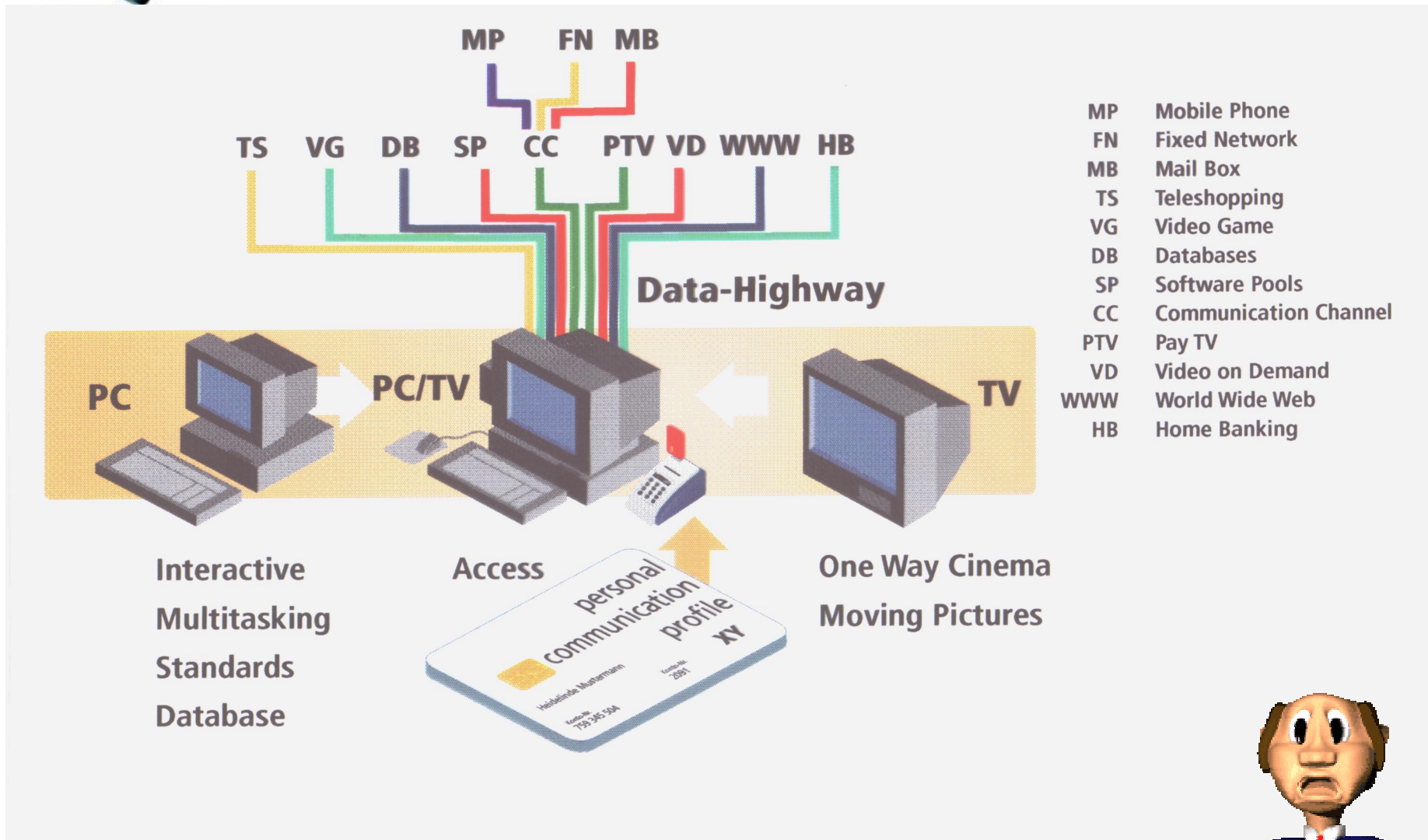


# Internet: What's that?





# The multifunctional work place: Multimedia



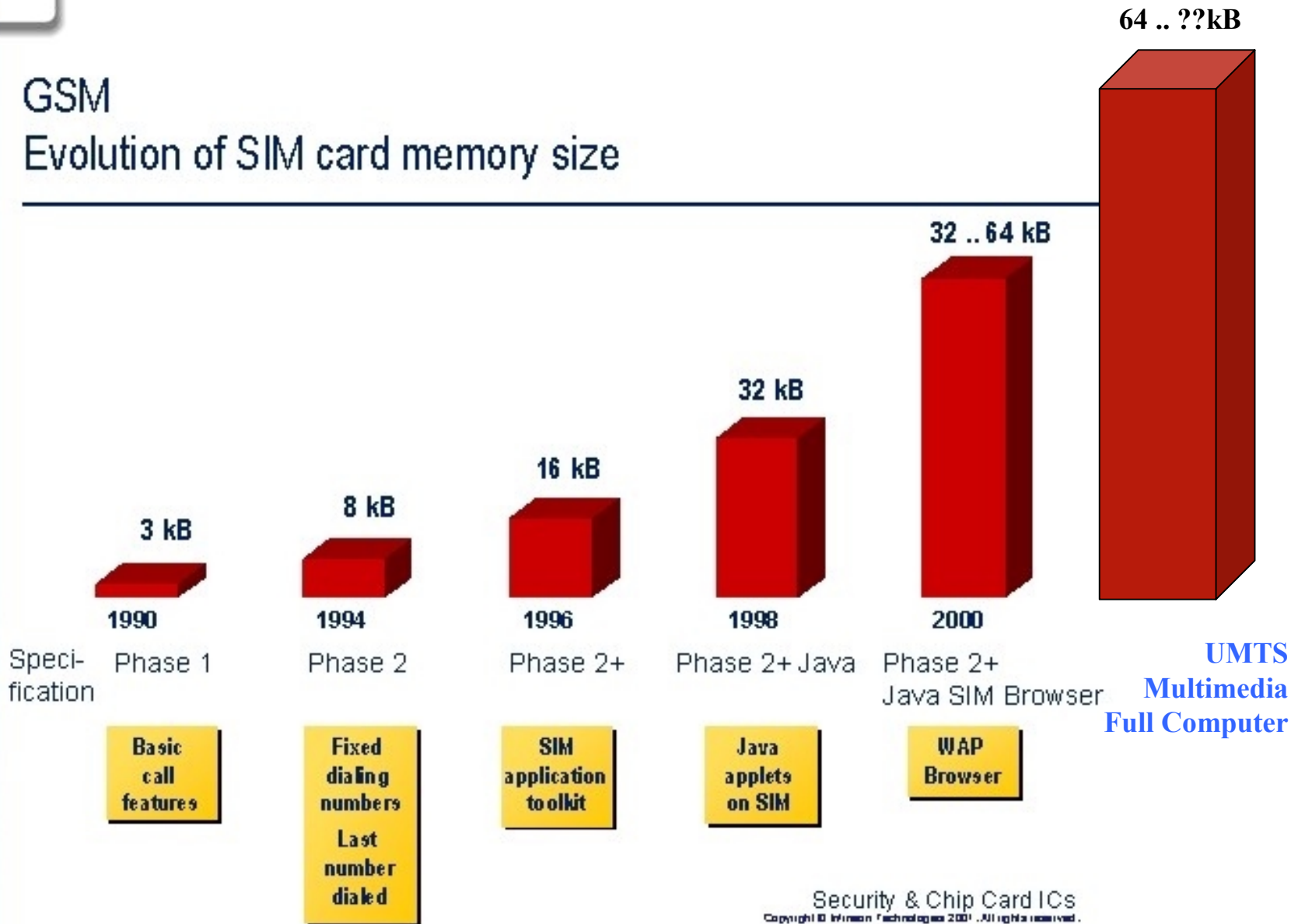


# State of the Art in Microprocessors



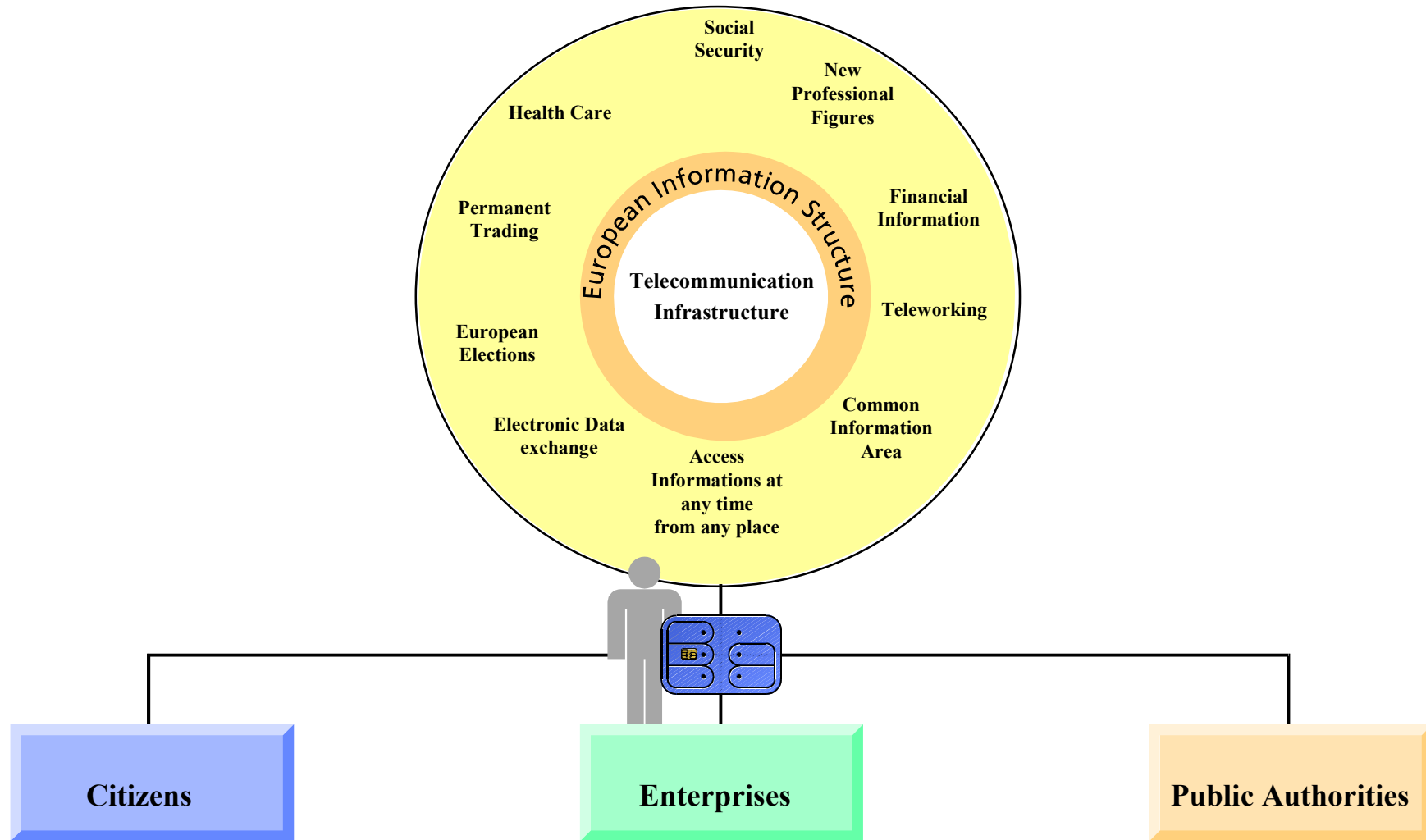
GSM

Evolution of SIM card memory size



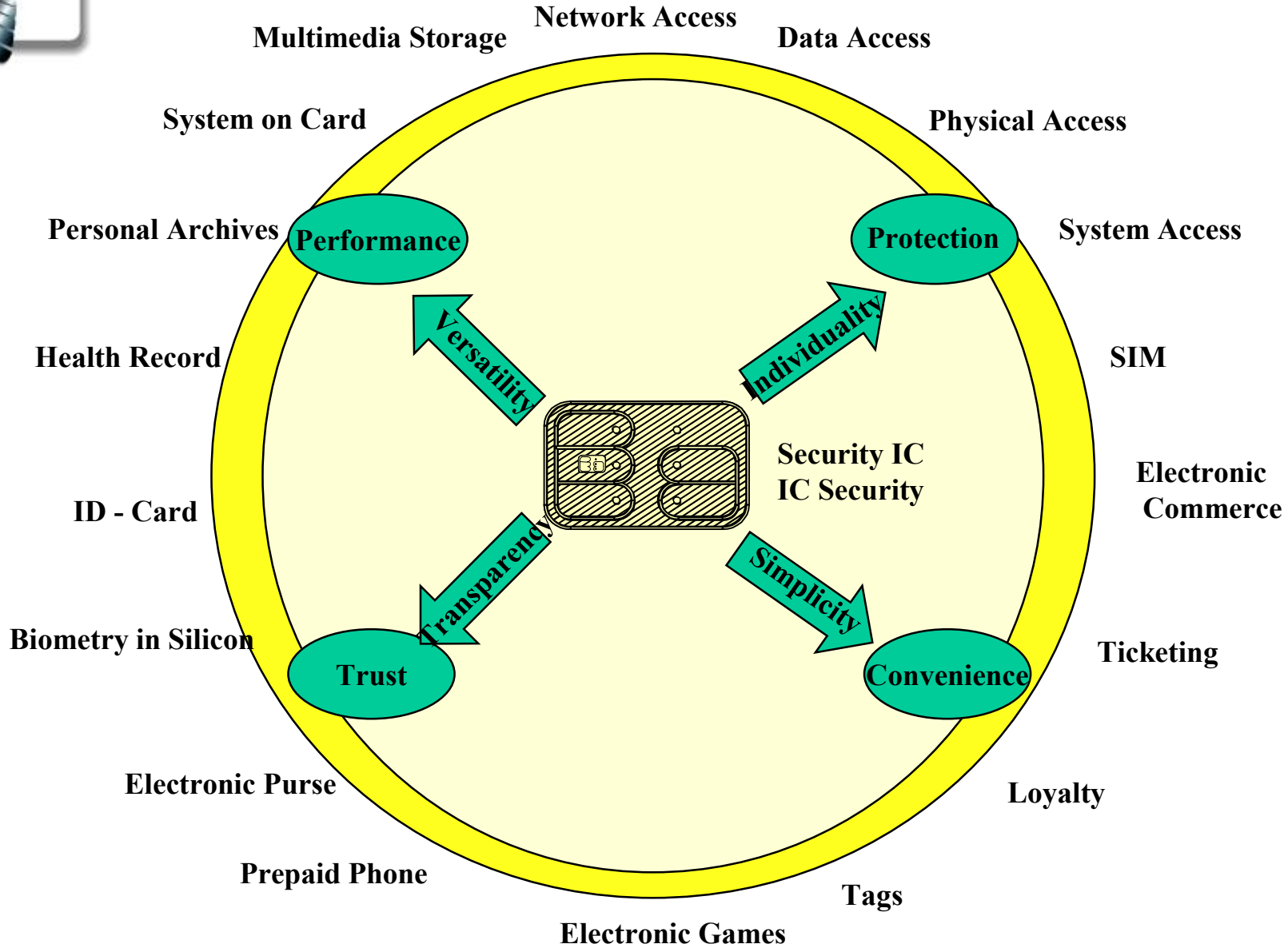


# Smart Cards: The organizational Means of the 21st Century





# Smartcard - Applications





## Future projects

**UMTS**



- Videoconference
- Broadcast of events
- Shopping tips via GPS

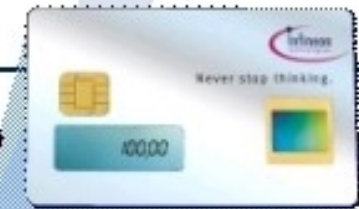
- Electronic contracts that are legal binding

**Digital signature**



Europe

**electronic ticketing travel management**



electronic ticketing travel management



**Health care**

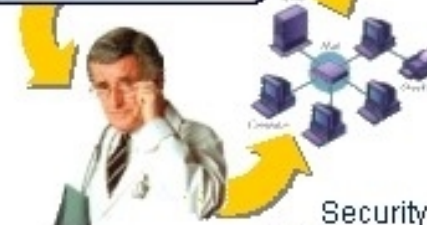


- Important patient data
- Prescriptions

**M-/ E-Commerce**



- Mobile payment
- Online shopping



Security & Chip Card ICs

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# Where are we coming from?

## Smart Card Concepts and Associations

Multos  
ISO 14443 B  
C++  
PCOS  
CardOS  
SCF  
Visual Basic  
NICCS  
Eurosmart  
ISO/IEC 7816  
Assembler  
JAVA  
TeleTrust  
SmartCard Alliance  
GTA  
StarCOS  
M.MAR  
Global Platform  
Common Criteria  
AFPC  
ISO 14443 A

... and many more



# Proprietary Systems

**ePurse**

**Geldkarte  
Chipper  
VisaCash  
CEN WG 10**

...

**HealthCare**

**Sesame Vitale  
Gesundheitskarte**

...

**Transport**

**Paris  
Hongkong  
San Francisco**

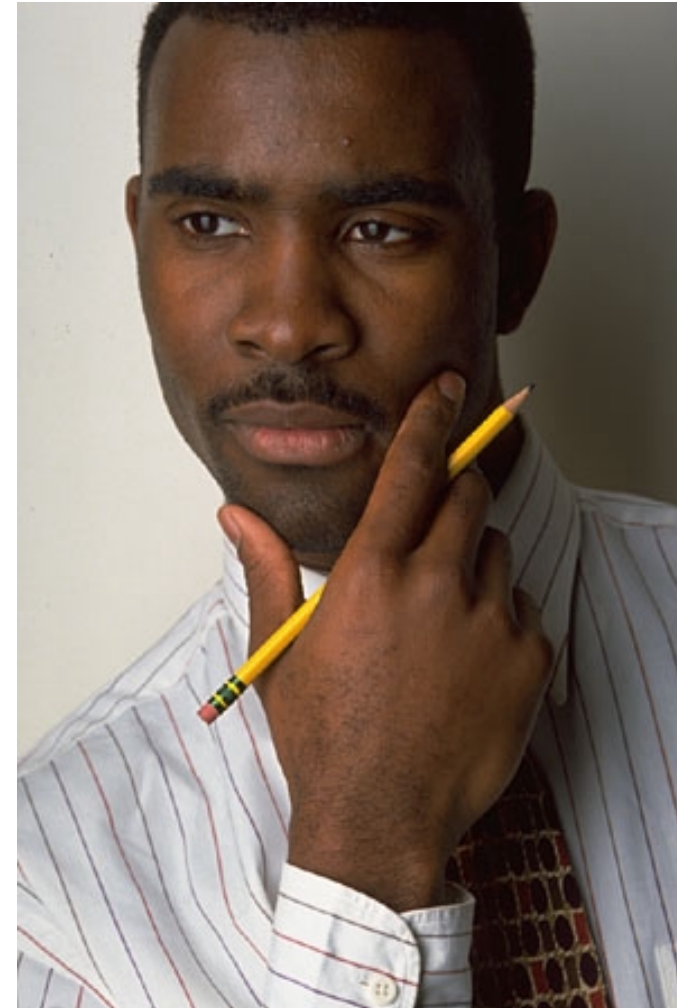
**... and more**

...



# Is this an Industry?

„Should I invest“?





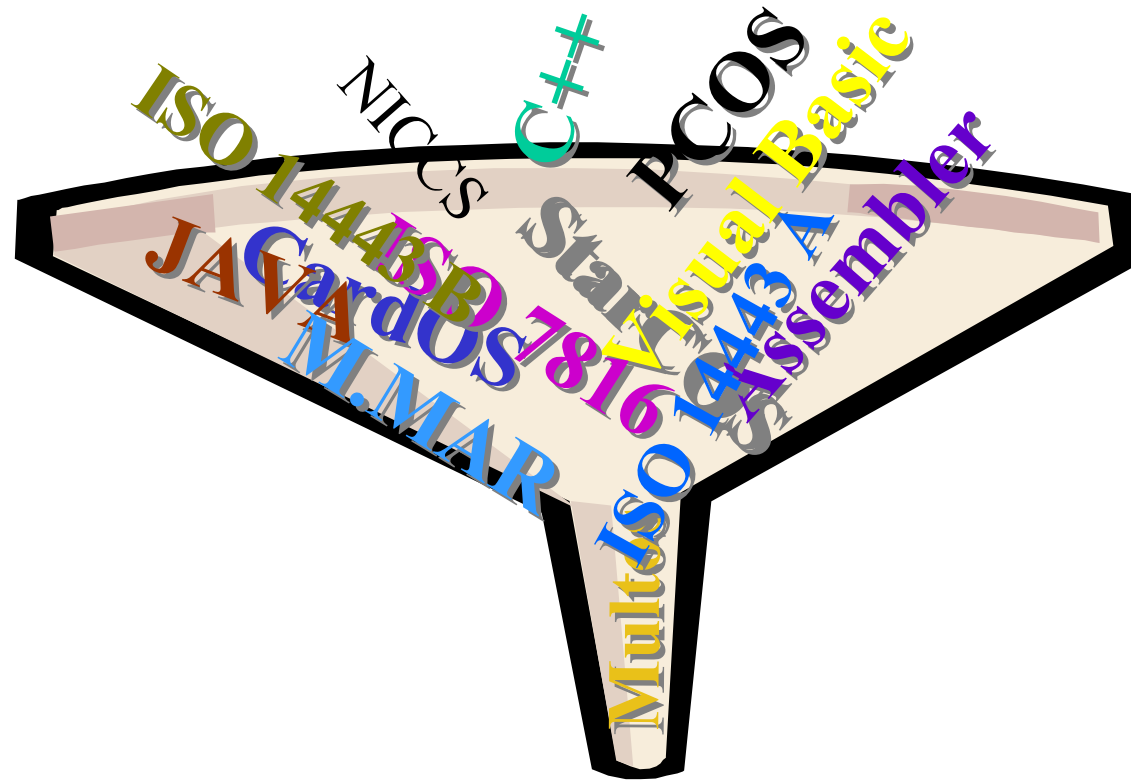
## What are the characteristics of a mature smart card industry?

- Growing Acceptance of the Product**
- Growing Market Potential**
- Security of Investment for Issuers**
- Equal Opportunity of the Players**
- Better Competition**
- Decreasing Development Costs**
- ... and more through:**

**STANDARDIZATION / HARMONISATION**



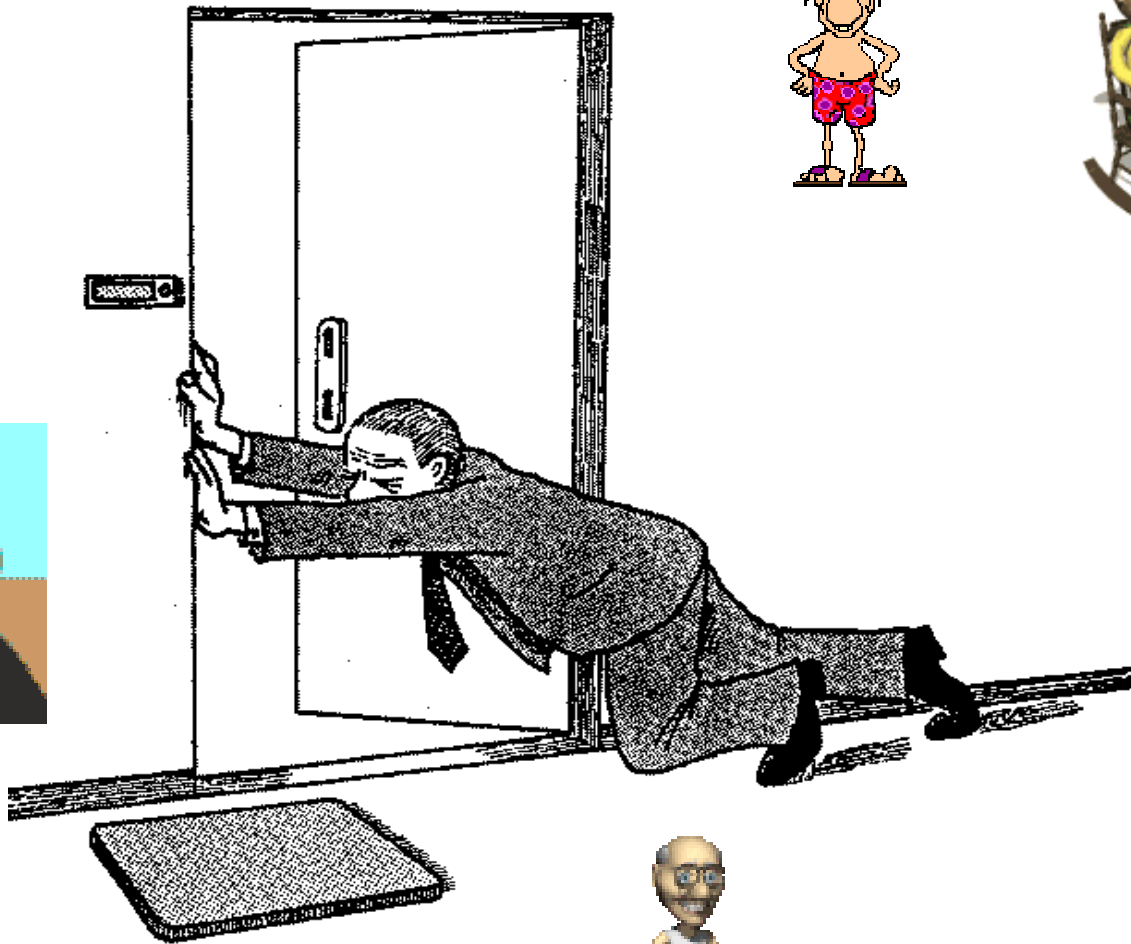
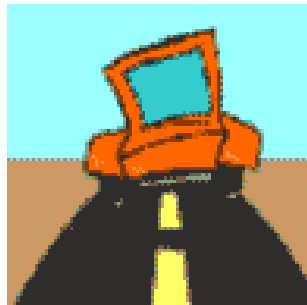
# Towards an interoperable Platform



**Open interoperable Platform**



# Changing the procedures and organisation





# eEurope 2002

***“An Information Society for all”***

## eEurope Objectives

- Bring every citizen, school, business and administration on-line - quickly!
- Create a digitally literate and entrepreneurial Europe
- Ensure an inclusive information society



# eEurope 2002

## Action Lines

### **A cheaper, faster, secure Internet**

- 1) Cheaper and faster Internet access
- 2) Faster Internet for researchers and students

### **3) Secure networks and smart cards**

### **Investing in people and skills**

- 4) European youth into the digital age
- 5) Working in the knowledge-based economy
- 6) Participation for all in the knowledge-based economy

### **Stimulate the use of the Internet**

- 7) Accelerating e-commerce
- 8) Government online: electronic access to public services
- 9) Health online
- 10) European digital content for global networks
- 11) Intelligent transport systems.

1960s





# eEurope Smart Card Charter: Vision

- ❑ Empower the **individual** to **access resources** in the physical world and over networks, anytime, anywhere with adequate privacy and security
- ❑ Raise the prospect of smart card technology to a **mainstream** computing platform for **trust services**  
by
  - **Harmonizing** smart card based infrastructures across sectors by building a consensus for minimum **compatibility**.
  - Stimulating inter-sector cooperation to encourage **interoperability**



## eESC Key principles

- ❑ **Open to all interested parties (incl. non-EU players)**
  - User-centric (consumer and professional)
  - Industry-led / respecting competitive forces
  - Public sector involved mainly as a lead user for certain applications (e.g. transport, e-government)
- ❑ **Focus on secure access to Internet-based services**
- ❑ **Rely on European strengths (banking, health card,...)**



# eESC Charter Action Areas

The Smart Card Charter identified 4 target action areas:

- Building trust
- Enhancing usability
- Improving access
- Deploying applications & services



# eESC Charter Actions ...

## Building Trust

- Set of minimum security requirements
- Harmonised security certification
- Interoperable specifications for identification and authentication
- Liberalisation of trade and use of cryptographic products and services
- Fair cost conditions when using smart card
- Protection and use of personal data



# eESC Charter Actions ...

## □ Enhancing Usability

- Consistency of interfaces and operation
- Coherent use of contact and contactless cards
- Seamless use of multi-application cards and terminals



## eESC Charter Actions ...

### □ Improving Access

- Broaden service access: geographically and across sectors
- Easy access to Internet
- Permanent dialogue telecoms/service providers to avoid fragmentation of mobile commerce
- Reliable and efficient smart card based e-payments and best use of existing infrastructure



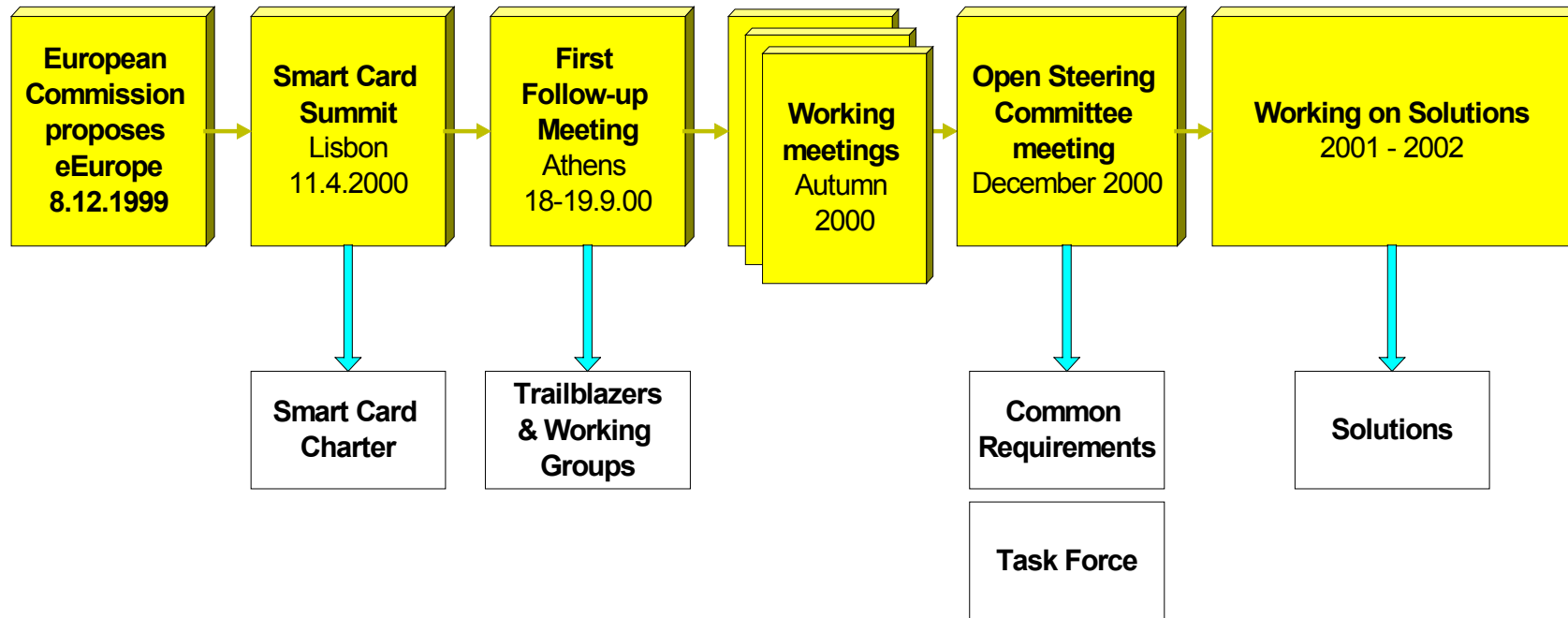
## eESC Charter Actions ...

### **Deploying Applications & Services**

- Foster development of government applications (government on-line)
- Common requirements for major public services starting up with Public Transport and Health
- Exchange of experience regarding electronic identification (e.g. Finland, Italy, Sweden)



# eESC Program Outline







## eESC deliverables

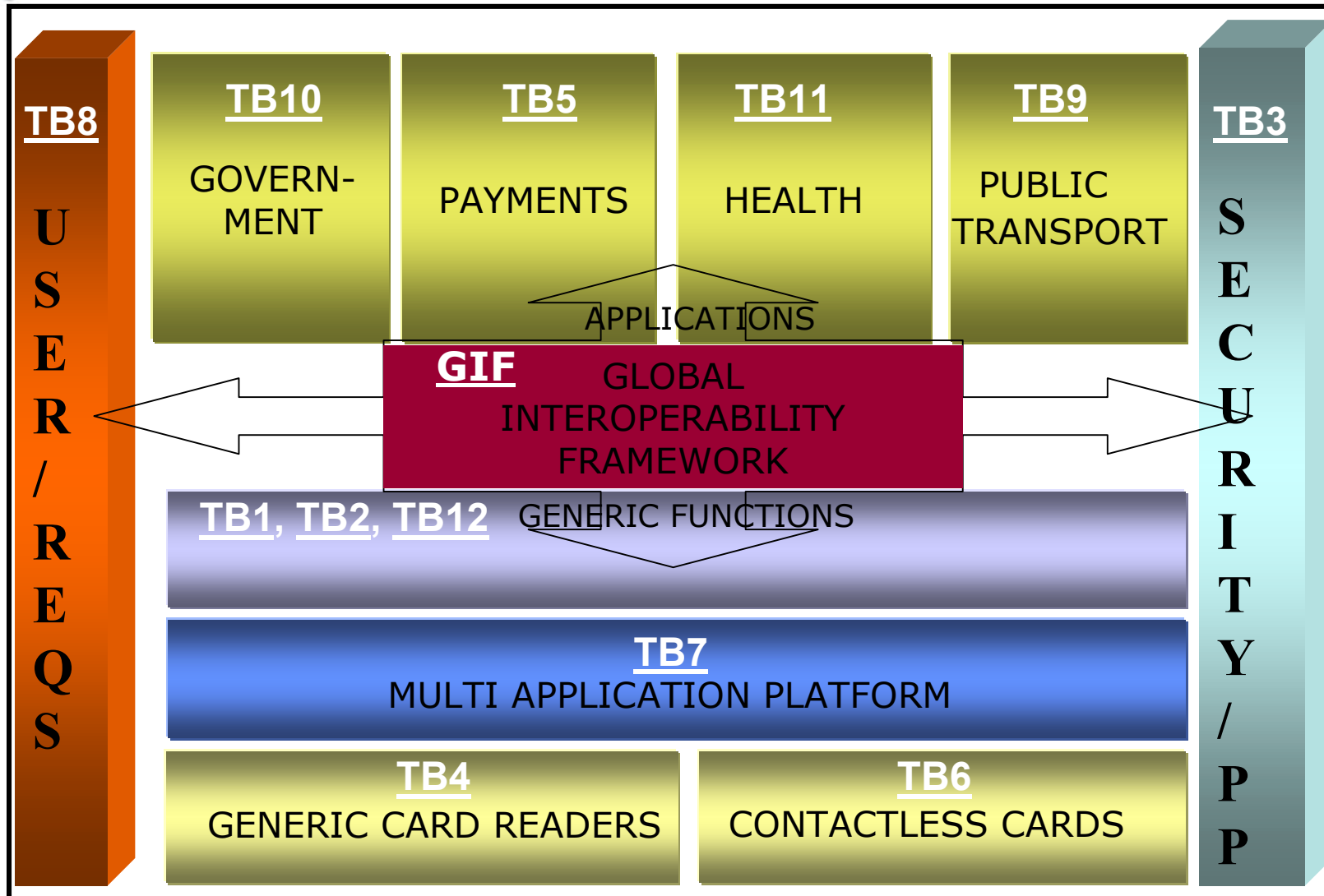
- ❑ Smart Card Charter Common Requirements  
(established December 2000)
- ❑ Common Specifications (end 2002 deliverable)
  - Surveys, Reports, White papers
  - Contribution to standards
  - Implementation guidelines
  - Dissemination activities
  - Pilot project(s)
  - other ...



# eESC Trailblazers

- 1 Public Identity
  - 2 Identification & Authentication
  - 3 Protection Profiles, security certification
  - 4 Generalized card reader
  - 5 e-payments (including purse, credit/debit, m-commerce)
  - 6 Contactless Smart Cards
  - 7 Multi-application systems
  - 8 User requirements
  - 9 Public Transport
  - 10 e-Government
  - 11 Health
  - 12 Advanced Electronic Signature
- eEPOCH

# eESC Logical structure





# TB 1: Public Identity

## Objectives

- ❑ plan for a common European Citizen Digital ID Document.

## Deliverables

- 1: Inventory of legislation and practice regarding identities
- 2: Common specifications for public identity and identification
- 3: Guidelines for citizen certificates
- 4: Selection of pilot projects
- 5: Report providing a consolidation of the overall results



# TB 2: Identification and Authentication

## Objectives

- ❑ Co-ordinate with other Trailblazers to identify the functional requirements related to each individual Trailblazer
- ❑ respond to such functional requirements
- ❑ identify technology requirements and a methodology for the scope areas of other Trailblazers

## Deliverables

- 1: inventory of existing smart card based PKI implementations with priority to Public Identity
- 2: definition of a common platform for functional interoperability
- 3: provide technology guidance in response to TB1 requirements
- 4: accommodate additional requirements from other trailblazers (in relation to Deliverable 2) on first come, first served basis.



# TB 3: Protection Profiles, Security certification

## Objectives

- ❑ promote and facilitate the adoption of the Common Criteria (CC) - ISO/IEC 15408 standard through the Smart Card Industry for the evaluation and the certification of products and systems, to provide trust and confidence to the smart card users

## Deliverables

- 1: List of current issues in using Common Criteria
- 2: Proposal of possible solutions
- 3: Proof of concept
- 4: Promotion and education around Common Criteria
  - Establish a communication and education plan
  - Implementation of promotion and education



# TB 4: Generalised Smart Card Reader

## Objectives

- to propose an architecture and a set of technical specifications for a secure IC card reader to be used in e-commerce and related IC card based applications on open networks

## Deliverables

- 1: Detailed work plan
- 2: Business requirements
- 3: Functional architecture and technical requirements
- 4: Functional security specifications
- 5: Protection profile
- 6: Technical architecture and APIs
- 7: Virtual machine
- 8: Exploitation plan



# TB 5: e-Payment and m-Payment

## Objectives

- ❑ enable broad adoption of smart cards as a means of secure payment, and ensure interoperability across channels, sectors and borders

## Deliverables

- 1: EMV migration synchronization and Open Networks
- 2: eEuro implementation and Continental Roll out
- 3: Report on e- and m-payments convergence





# TB 6: Contactless Smart Cards

## Objectives

- ❑ to promote the use of contactless smart card technology by creating an Industrial Offer matching the End User needs

## Deliverables

- 1: Technical foundations: interoperability, security, certification
- 2: Educational and promotional efforts
- 3: Market development of contactless technology: roadmap for trials and deployment towards operators
- 4: Definition of a common platform, roadmap for interoperability
- 5: Pilots, Interoperability demonstrator, Final reports/guidelines, Catalogue



# TB 7: Multi-Application Systems

## Objectives

□ to enlarge Citizen's freedom of choice in the selection and management of the ICT services they wish to access using smart cards as the generic access token

## Deliverables

- 1: The provision of input to standardisation
  - new requirements for extension
  - the need for new topics to be addressed
- 2: Implementors' work book / toolbox
  - to enable open & interoperable systems
  - common framework business model
  - generic trusted architecture for secure management and operation
  - methodology for the development of portable smart card applications
- 3: Possible input for the enactment of supporting legislation



# TB 8: User Requirements

## Objectives

It is a specific objective of this Trailblazer to interact with all other Trailblazers to provide them with user requirements input.

- ❑ to ensure that the user interface and functionality of ICT systems employing smart card technology meet already identified requirements
- ❑ to support Citizen aspirations, to provide systems that are attractive to Citizens
- ❑ to guarantee inclusiveness for all categories of Citizen.

## Deliverables

- 1: Work book best practice guide supporting Citizen access
- 2: User requirements specification
- 3: Overview of new technology – new interface issues
- 4: Input to CEN TC224 WG6, and to ETSI TC HF



# TB 9: Public Transport

## Objectives

- ❑ support Public Transport utilising smart card access tokens, including the need for interoperability between smart card based European transport ticketing systems

## Deliverables

- 1: Creation of a best Practice Guide based on the results of operational trials between cities and public transport operators demonstrating practical results of the application of interoperability
- 2: A methodology for the specification of smart card based ticketing systems based on common sector requirements
- 3: A work book/toolbox for use by implementors
- 4: Modules of information (including methods, structures, roles, entities, finance models etc); of relevant legislation; and of system components (hardware/software)



# TB 10: e-Government

## Objectives

- ❑ achieve definition, rationalisation and implementation of a European model for digitally performed procedures employing smart card for interfacing with Public Administration
- ❑ promote more effective use of government's information resources
- ❑ give access to public services and simplify on line administrative procedures that use secure smart card solutions based on standards such as electronic signature, PKI infrastructure and internet.

## Deliverables

- 1: Coordinate the necessary constituency
- 2: collect national initiatives and feasibility studies on B to A C to A and trans-national exchange of data e-government applications
- 3: organise relationships with other trailblazers
- 4: common policy and architecture for functional interoperability and standardisation process for B to A and e-procurement
- 5: dissemination of findings and results



# TB 11: Health

## Objectives

□ contribute to a European wide interoperability of healthcare cards concerning patient data as well as to health professional cards and to their usage in networks, addressing administrative data as well as healthcare/health related data and different functionalities, e.g. ID-card, signature card and health card

## Deliverables

- 1: Consensus building activities (e.g. Workshops to identified scenarios or solutions, Promotion activities like Conferences and Web sites; Better involvement of key groups)
- 2: Recommendations and white papers (e.g. benefit and synergy between cards and IT networks; useful applications; requirements and functionalities)
- 3: Demonstrators and pilots



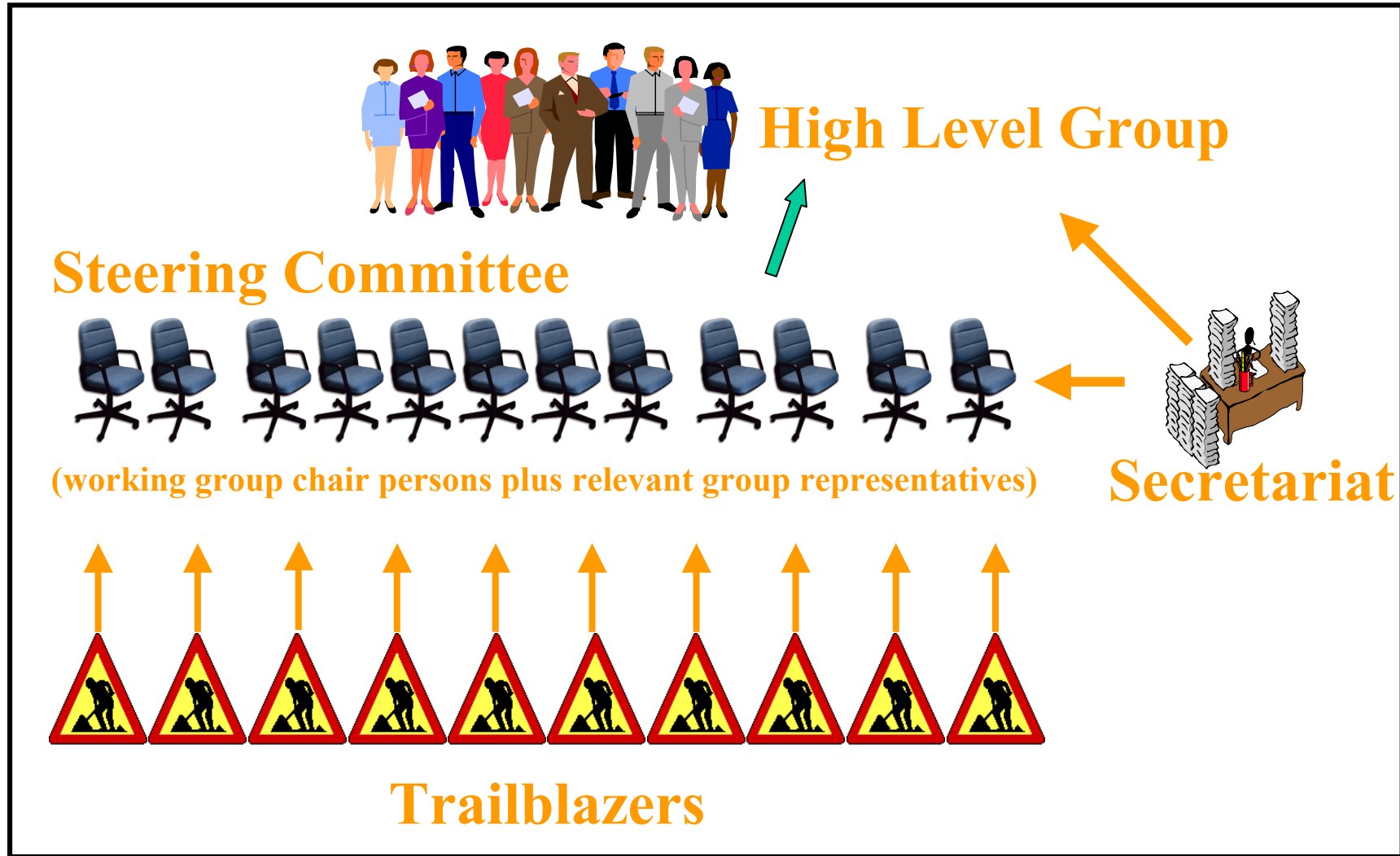
# TB 12: Advanced Electronic Signature

## Objectives

□ to provide European Citizens with Advanced Electronic Signature use, as per the European Directive, through a Smartcard based system for Internet.

## Deliverables

- 1: identify and review architectures of existing projects
- 2: confirm target markets
- 3: identify elements and technologies required
- 4: proof of concept and validation of systems architecture
- 5: identify project stake holders (users, service providers, Consortium to build
- 6: Implementation and deployment of system







# Steering Committee Members

Jan van Arkel (Co-Chair)  
Lutz Martiny (Co-Chair)  
Henry J F Ryan (Secretary)  
Tapio Aaltonen, Chair TB 1  
Andreas Mitrakas, Chair TB 2  
Jean-Paul Thomasson, Chair TB 3  
Hubert Jacquet, Chair TB 4  
Stefanos Karapetsis, Chair TB 5  
Andrew Roberts, Chair TB 6  
Lorenzo Gaston, Chair TB 7  
Alan Leibert, Convenor TB 8  
Stefan Kissinger, Chair TB 9  
Frédéric Tatout, Co-Convenor TB10  
David Ankri, Co-Convenor TB 10  
Jürgen Sembritzki, Chair TB 11  
David Stephenson, Chair TB 12  
Yves Chauvel, Telecommunications  
Kristina Unverricht, Consumers

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stefan.kissinger@bvg.de  
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david.ankri@wanadoo.fr  
j.sembritzki@ztg-nrw.de  
david.stephenson@cyber-comm.com  
yves.chauvel@etsi.fr  
kristina.unverricht@din.de



# High Level Task Force

Senior Leaders (Presidents, CEOs, Board Members) **nominated and invited by the European Commission** from Industry and Administrations

- to receive reports from the Steering Committee, discuss the work in progress with the Steering Committee, and finally report to and discuss necessary actions with the European Council
- also the High Level Group may act in case of conflicts between different groups of interest in or between trailblazers which the Steering Committee cannot resolve by itself



# Secretarial Support

- ❑ Arrangements for Steering Committee and Open Public Meetings, including agreement of Agenda with the Chairmen
- ❑ Distribution of Technical Contributions from Working Groups, and management of mailing lists.
- ❑ Website
- ❑ High Level Group

Secretariat duties are shared among CEN, ETSI and EUROSMART



# On-going Information

- <http://eeurope-smartcards.org>
- [info@eeurope-smartcards.org](mailto:info@eeurope-smartcards.org)
- [lutz@martiny.org](mailto:lutz@martiny.org) or [arkel@cardlife.nl](mailto:arkel@cardlife.nl)





# The *Smart Card Symphony* “Allegory”

