### Shaping the road to ubiquity



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Note:

e: The views expressed in this presentation are those of the author and do not necessarily reflect the opinions of the ITU or its membership. Lara Srivastava can be contacted at lara.srivastava@itu.int

#### The search for ubiquity

- "Ubiquity" by any other name
- To an age-old human struggle...
  - Space
    - Many places at once
    - Disappearing distance
  - Time
    - Expanding time
- ...we add "the final element":
  - Context



Sign of the times: The importance of being mobile

- Innovation in digital technologies and popularity of portable ICT devices
- Speed, speed and more speed
- Growing value of **information**, esp. timely and "on-the-go" information
- "Lifestyle" and "Personalization" as an integral element of ICTs



#### International Telecommunication Union

#### Mobility is getting 'close-up' and personal



Atelab's Chameleon operates in two positions; vertical as a mobile phone and horizontal as a game console



NTT DoCoMo's F505i with fingerprint sensor





#### **NOKIA** tells us:

...create a stylish backdrop for exposing your persona, whether demure or outrageous. So go ahead:

#### **REVEAL YOUR HIDDEN SELF**

## Towards mobile ubiquity (1): anywhere, anytime...

- **Preserving your health**: Swallowing a tiny mobile device can help track a patient's vitals remotely and diagnose illnesses without intrusive surgery
- Showing you the way: Easy-to-use navigation systems can get you where you're going efficiently.
- **Taking inventory**: Tiny ID tags can track inventory, reducing business overheads, and even helping to lead the blind
- Keeping safe: Location technologies can keep small children or the elderly out of harm's way
- **Keeping dry**: Wearable computing can adjust your clothing to weather/forecasts
- Saving your cereal: An intelligent fridge can pre-order milk for you before you run out

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## Towards mobile ubiquity (2): ...anyone, anyhow?

- But...can *anyone* have access to information about your health or heart rate at any given moment?
- And *who* can/should track your every move?
- Should anyone know exactly *what* you eat, *when*, *how much*?
- Do/should RFID tags remain active?
- Can portable mobile devices capture your personal documents without your consent?



# Ubiquitous technologies are blurring boundaries

- Private lives become public
  - Nuisance & Courtesy
  - Less isolation
- Public spaces become private
  - Group dynamics
  - Staying connected
  - Safety issues





# Portable mobile multimedia and attempts at managing use

#### • The "Moblogging" trend

- Personal diaries, increase of person-generated content
- But can high-resolution footage be taken then posted on the Web without the consent of the photographed?
- "Snappy digital shoplifting" in Japan
- Private sector starts banning use of camera phones
  - Changing rooms/public pools (Japan-Tipness Fitness, Australia-e.g.YMCAs)
  - Car manufacturers (e.g. Sweden-Volvo, Germany-BMW)
  - Mobile handset manufacturers (e.g. Samsung!)
- Public sector begins to acknowledge risks
  - first European body to act is Italy's Garante per
    - la Protezione dei Dati Personali



## **Omnipresent mobile Spam?**



- New forms of 'spam' over mobile networks (e.g. using SMS) enable promotions to be sent to millions of users overnight
- Mobile spam is a threat to online privacy
- Concerns:
  - The unsolicited nature of the messages
  - Potential for misleading product descriptions
  - Lack of accurate pricing information
  - The nature of the content (e.g. adult content)

The rise of increasingly personalized and ubiquitous mobile devices pose a threat to both aspects of online privacy (protection of private data & freedom from interference)



## Conclusion: Shaping the road to ubiquity

Let's keep our feet on the ground and our approach to shaping the future a **collective** one!







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#### www.itu.int/futuremobile