



ITU Kaleidoscope 2011

The fully networked human?
Innovations for future networks and services

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Fast-Forward Poster Preview

Chair: Martin Adolph, ITU/TSB

**Cape Town, South Africa
12–14 December 2011**



❖ Setting

- ❖ Give visibility to poster presenters
- ❖ Preview the poster session: today, 11.45-13.15

- ❖ 8 posters
- ❖ Malaysia, Italy, Japan, Greece, South Africa
- ❖ Cloud computing, energy label, mobility management, cybersecurity, telemedicine, white spaces

❖ Rules

- ❖ 1 minute / poster
- ❖ 2 slides / poster



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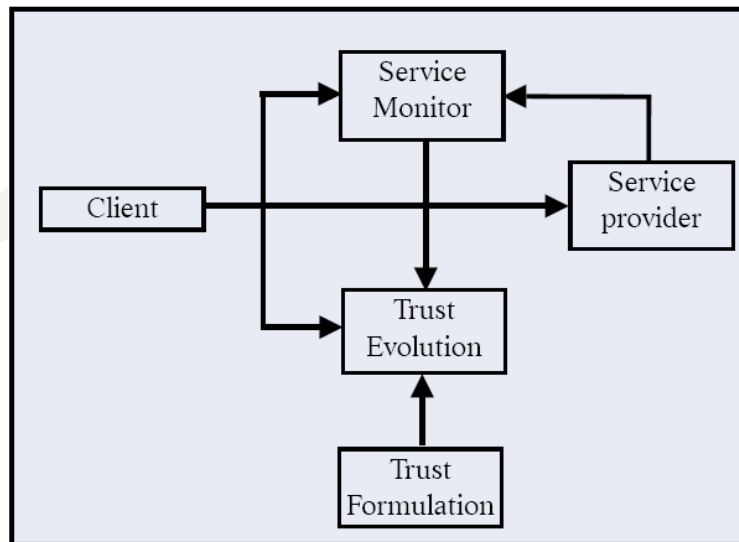
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Technical challenges of **Cloud Computing** before it can become commercial success ...



We propose an innovative Trust Computing Mechanism



required response time = τ_r
actual response time = τ_a
compute normalization parameter $(\delta) = \frac{|\tau_r - \tau_a|}{\tau_r}$

If $(\tau_a \leq \tau_r)$

Update all trust scores, where $(\tau_r > \tau_a)$

$$T_{n+1} = T_n + \delta * T_n \text{ where } T_0 = a \text{ and } n = 1, 2, \dots$$

Otherwise

Update all trust scores, where $(\tau_r < \tau_a)$

$$T_{n+1} = T_n - \delta * T_n \text{ where } T_0 = a \text{ and } n = 1, 2, \dots$$

End

a = Initial trust score computed TFU

with these features ...

1. Can serve clients with varying requirements
2. Modifies the scores continuously
3. System is updated using the most recent performance
4. Multiple/selected scores are updated concurrently
5. Can help provide differentiated service

Our work provides a foundation for future development of reliable cloud computing systems



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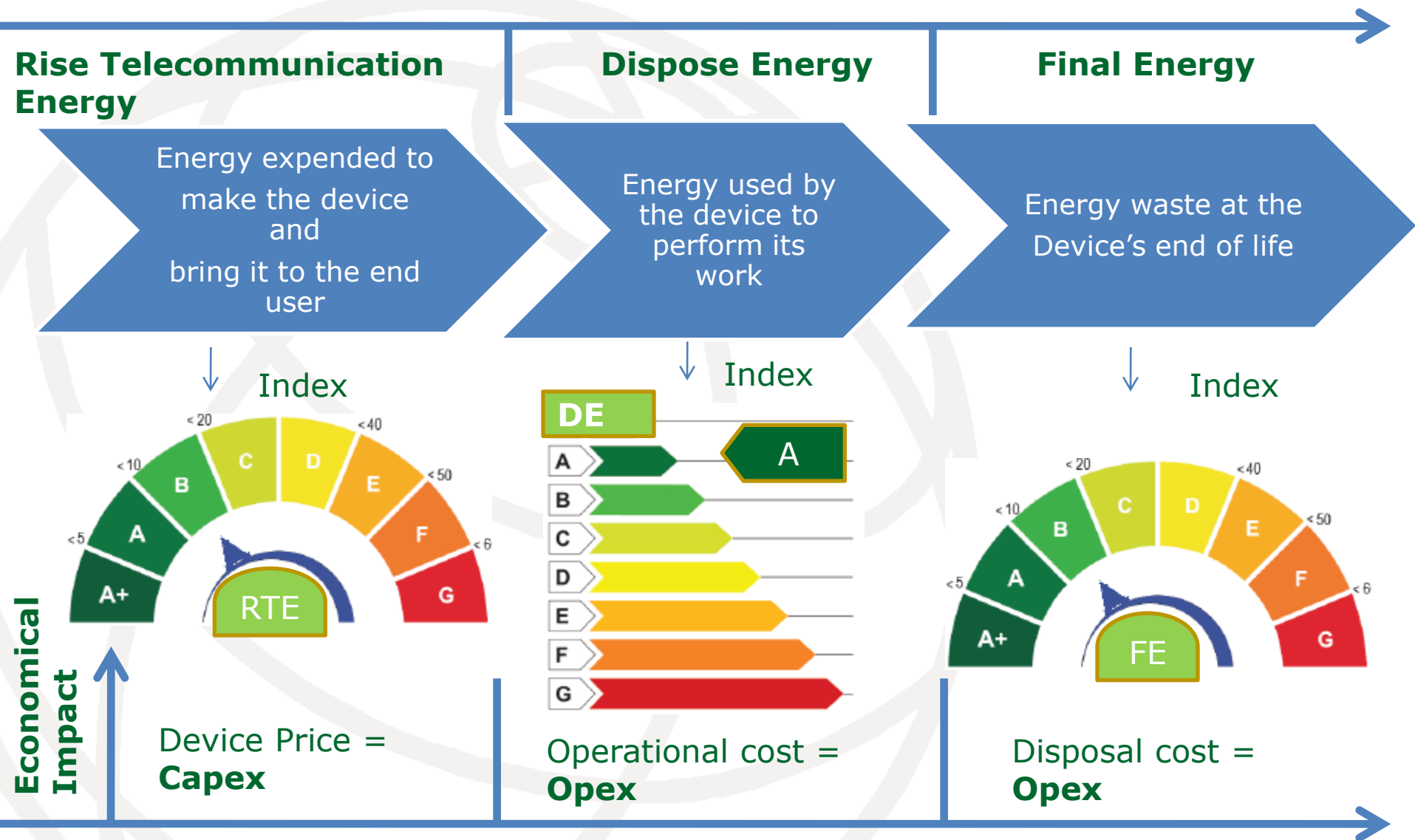
The Energy Label A Need To Networks And Devices

Virgilio Puglia
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virgilio.puglia@italtel.it

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Devices Life-Cycle Assessment





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A Distributed Mobility Management Scheme for Future Networks

Ved P. Kafle, Yasunaga Kobari, and Masugi Inoue



National Institute of Information and Communications Technology

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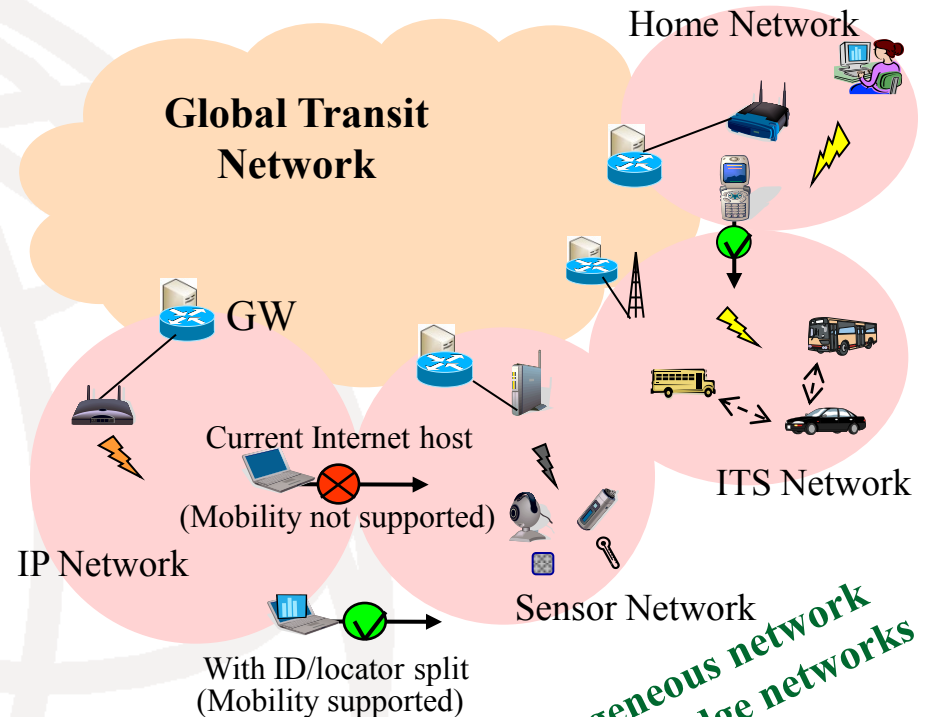
Overview of the contribution

□ What problem is solved

- Mobility management in heterogeneous networks (related current solutions assume homogeneous network layer protocols)

□ How it is solved

- Apply ID/locator split
- Have distributed mobility anchors (avoid single point of failure and suboptimal routing, and reduce handover signaling volume & latency)





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Toward Global Cybersecurity Collaboration: Cybersecurity Operation Activity Model

Takeshi Takahashi

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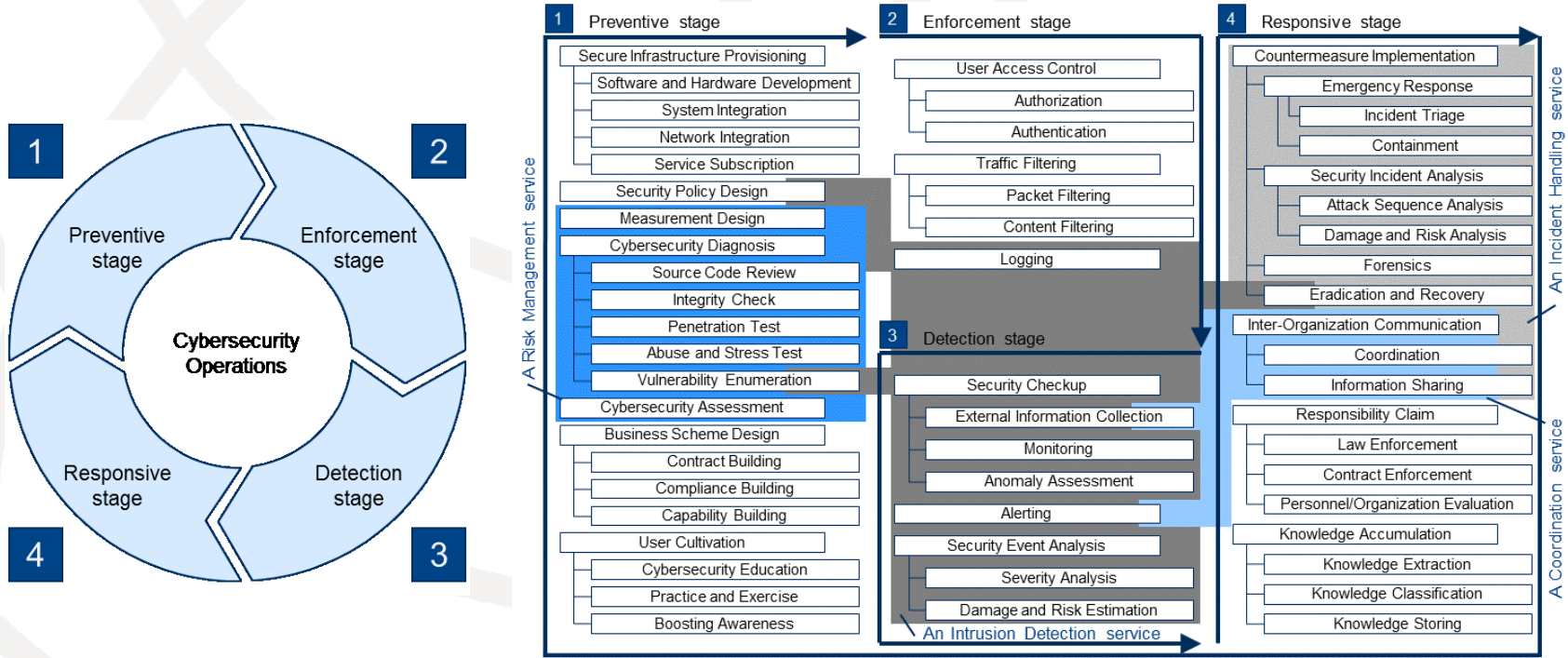
Cybersecurity Operation Activity Model

Problem

- Cybersecurity collaboration beyond organizational borders is necessary to cope with increasing cyber threats
- The absence of common vocabulary is one of its hindrances

Proposed approach

- We propose a cybersecurity operation activity model, which aids in defining a common vocabulary and visualizing cybersecurity, and demonstrate its applicability and usability





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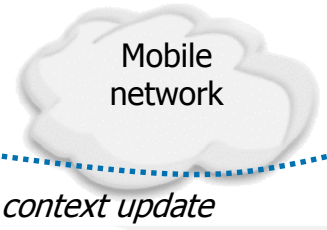


Context Management & Exposure in Clouds

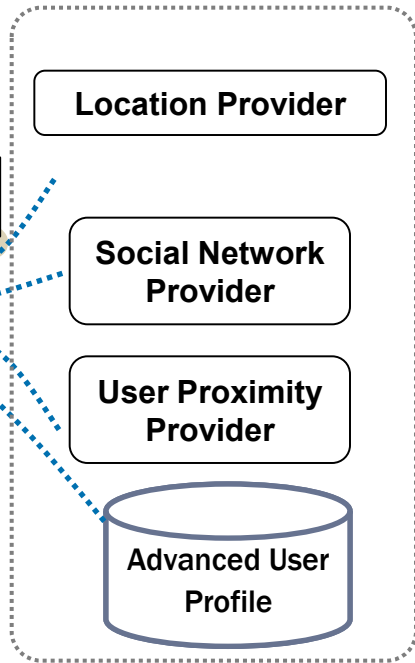
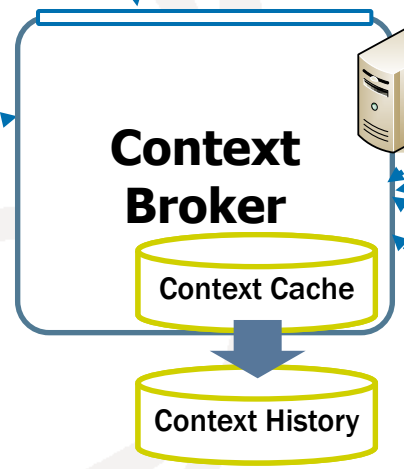
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<?xml version="1.0" encoding="UTF-8"?>
<contextQL>
  <ctxQuery>
    <action type="SUBSCRIBE" />
    <entity>username|test2</entity>
    <scope>civilAddress</scope>
    <validity>180</validity>
    <conds>
      <cond type="ONVALUE">
        <constraint
          param="civilAddress.city" op="EQ"
          value="Torino"/>
        </cond>
      </conds>
    </ctxQuery>
  </contextQL>
```



Context data: cell, bt, wf, deviceInfo, deviceSettings, deviceStatus, position, movement, ...



Get context *web API*



context providers



Boutique Advertisement in Shopping Mall

Discovery via
BlueTooth



Discovery
via GSM

Boutique

Delivery
via SMS

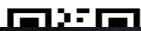
Delivery
via SMS

Boutique
perimeter

Max & Co



MAX & CO e' lieta di offrirti un coloratissimo **foulard** per le tue vacanze estive con l'acquisto di una T-shirt. Vieni alle casse con il codice sotto riportato e con i tuoi acquisti!



Max & Co



Max & Co presso lo **shopville Le Gru** ha in serbo per te uno splendido omaggio. Vieni a trovarci!





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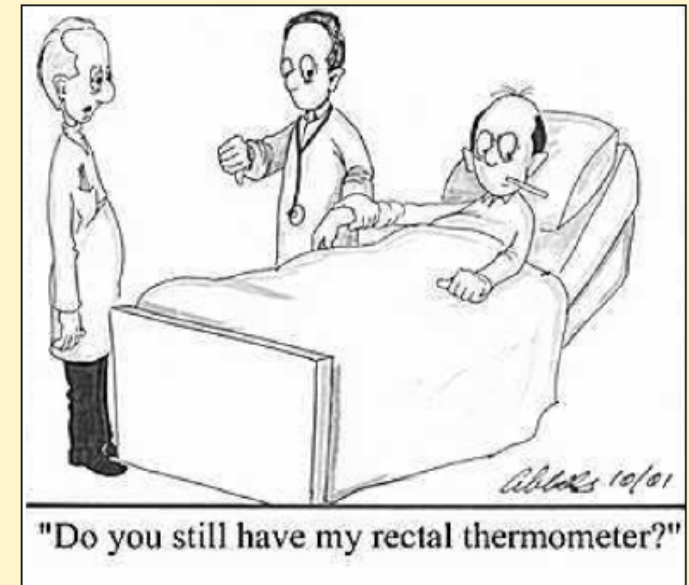


Supporting technically the Continuity of Medical Care: Status report and perspectives

B. Spyropoulos, M. Botsivaly, A. Tzavaras

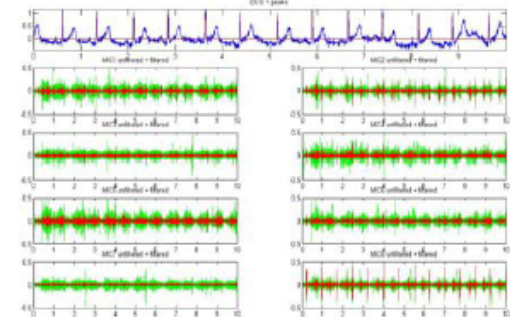
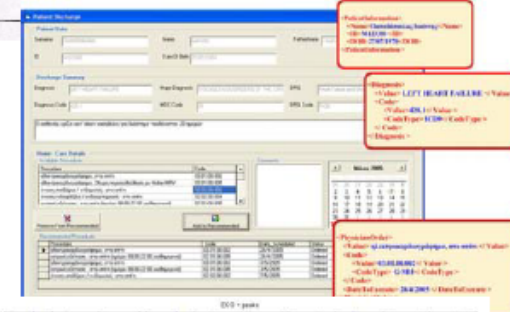
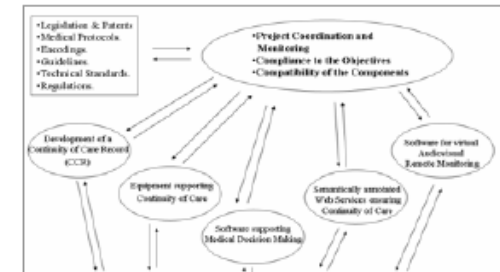
Biomedical Technology Laboratory, Medical
Instrumentation Technology Department
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Overview of the main components of the system

| | |
|---|--|
| 1 | Software for the formation of a Continuity of Care record, combining the ANSI-E2369 (CCR), the ISO 13606-1 and the prEN 13940 standards. |
| 2 | An integrated prototype Notebook-based system enabling the monitoring of Biosignals, Thoracic Impedance, Respiratory, Carotid and Pulmonary Sounds, in vitro Diagnostics Point of Care testing, and the post-discharge supported Respiration or Ventilation. |
| 3 | Medical Decision-making support for Cardiovascular and Respiratory Diseases, enabling post-discharge monitoring evaluation for emergency response, and ensuring Mechanical Ventilation settings Optimization. |
| 4 | Design of Semantically annotated Web-Services ensuring the Continuity of Care, including post-discharge Care Plan and Pharmacovigilance. |
| 5 | Software for Virtual Audiovisual Remote monitoring, supporting the continuity of care. |





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Coexistence of a TETRA system with a Terrestrial DTV system in White Spaces

Heejoong Kim
Graduate School of Media Design,
Keio University
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Research Object & Direction

- ❑ Why was TETRA system considered to DTV White Space applications?
 - ❑ Can be applied to Small idle space in DTV Band, i.e. 25kHz channel BW @ Release I
 - ❑ Usually used to public purpose such as PPDR
- ❑ What is the direction of research?
 - ❑ Investigate the possibility of coexistence of TETRA system with DTV in terms of interference according to the operating powers and frequency offsets



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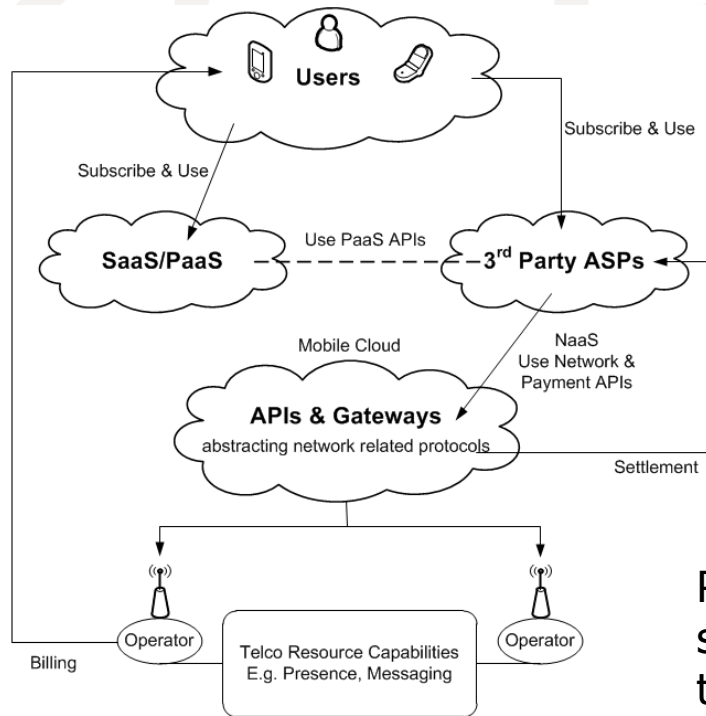


Mobile Cloud Computing based on SOA: Embracing Network as a Service for 3rd Party ASPs

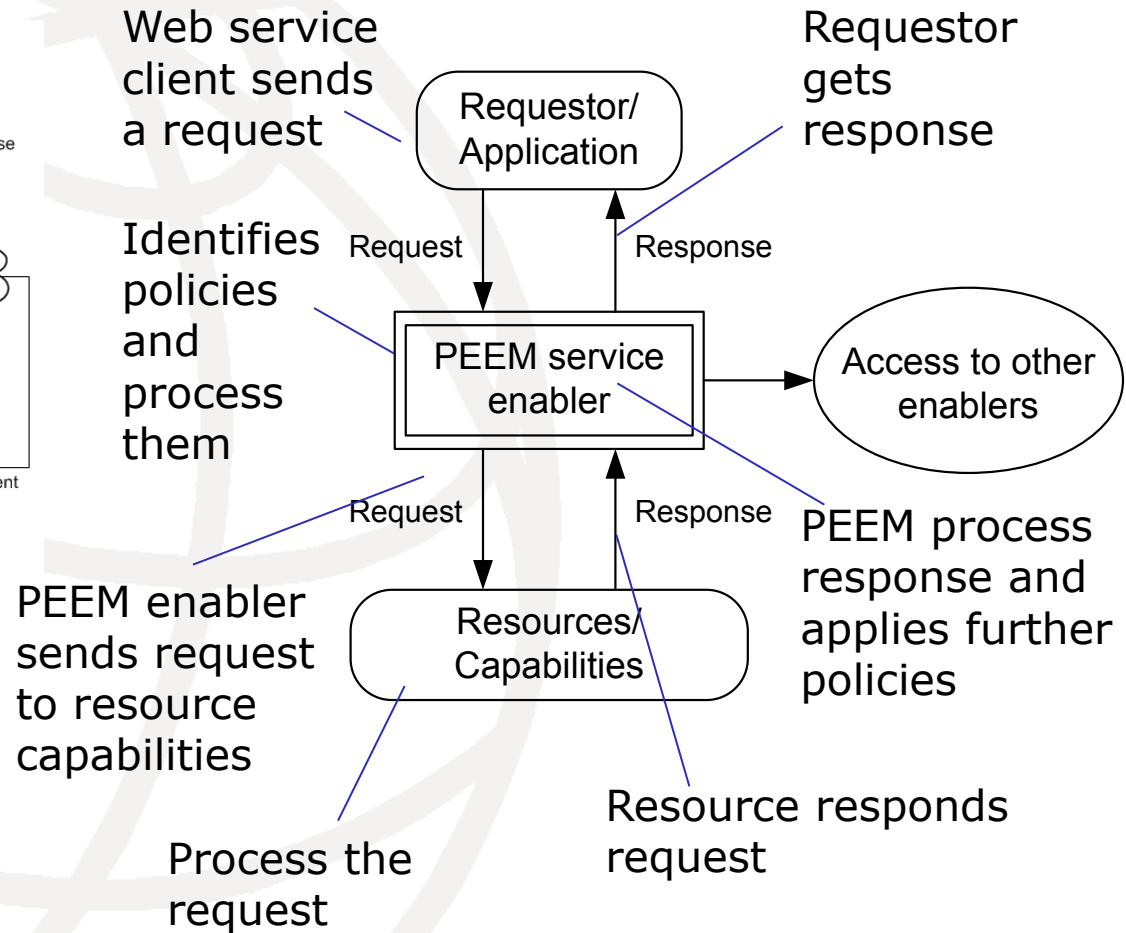
- ❑ Web 2.0 technologies emergence of Cloud Computing – computing resources and storage capabilities as infrastructure
- ❑ Telco's movement towards a SOA and an all IP based communication system for NGN - IP Multimedia Subsystem – core network, service creation
- ❑ IMS users can benefit from attractive cloud concepts
- ❑ 3rd Party ASPs value-added services
- ❑ Integration scenario approaches
- ❑ Mobile industry can benefit by offering NaaS

Architectural Overview

Network as a Service



PEEM Proxy usage pattern





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Thank you!

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