

# Service Program Mobility (SPM)

KuVS workshop, October 11<sup>th</sup>, 2011  
„Advanced SDP for Mobile Networks“



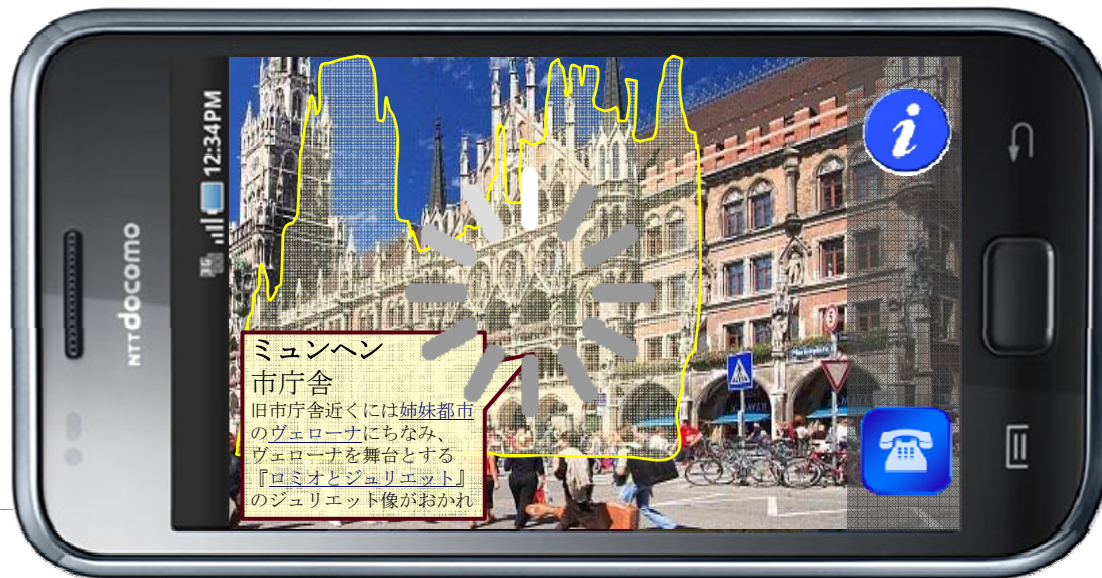
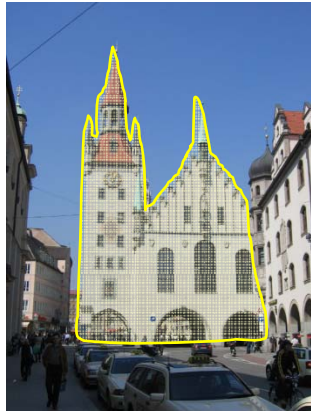
- Video is becoming the major traffic origin in mobile networks
- Higher user mobility: services must be available anywhere / anytime
- New interactive services have strict delay constraints
- Move content and services closer to users
  - Content Delivery Networks (CDN) improve access to data
  - Service Program Mobility (SPM) aims at improving access to services
    - Reduce bandwidth in core network
    - Reduce access latency, improve client response times of migrated services
    - Increase redundancy (avoid single point of failure)
    - Balance server loads



1. Film objects of interest
2. Stream video to ARS server in New York, USA
  - Object recognition from video stream
  - Gather information about objects
  - Augment video stream with information
3. Stream augmented video to user in Munich

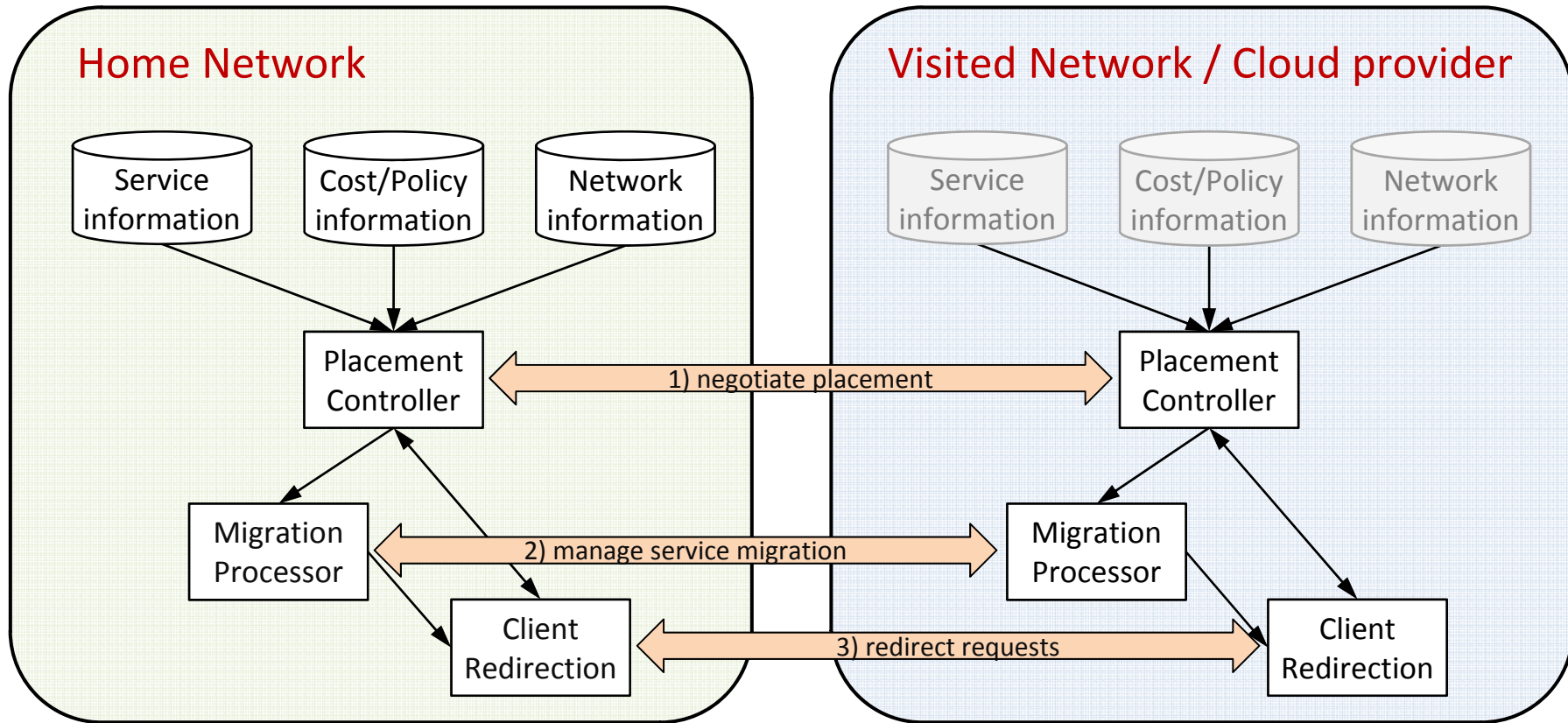
ARS: augmented reality service

# SPM use case “augmented reality”



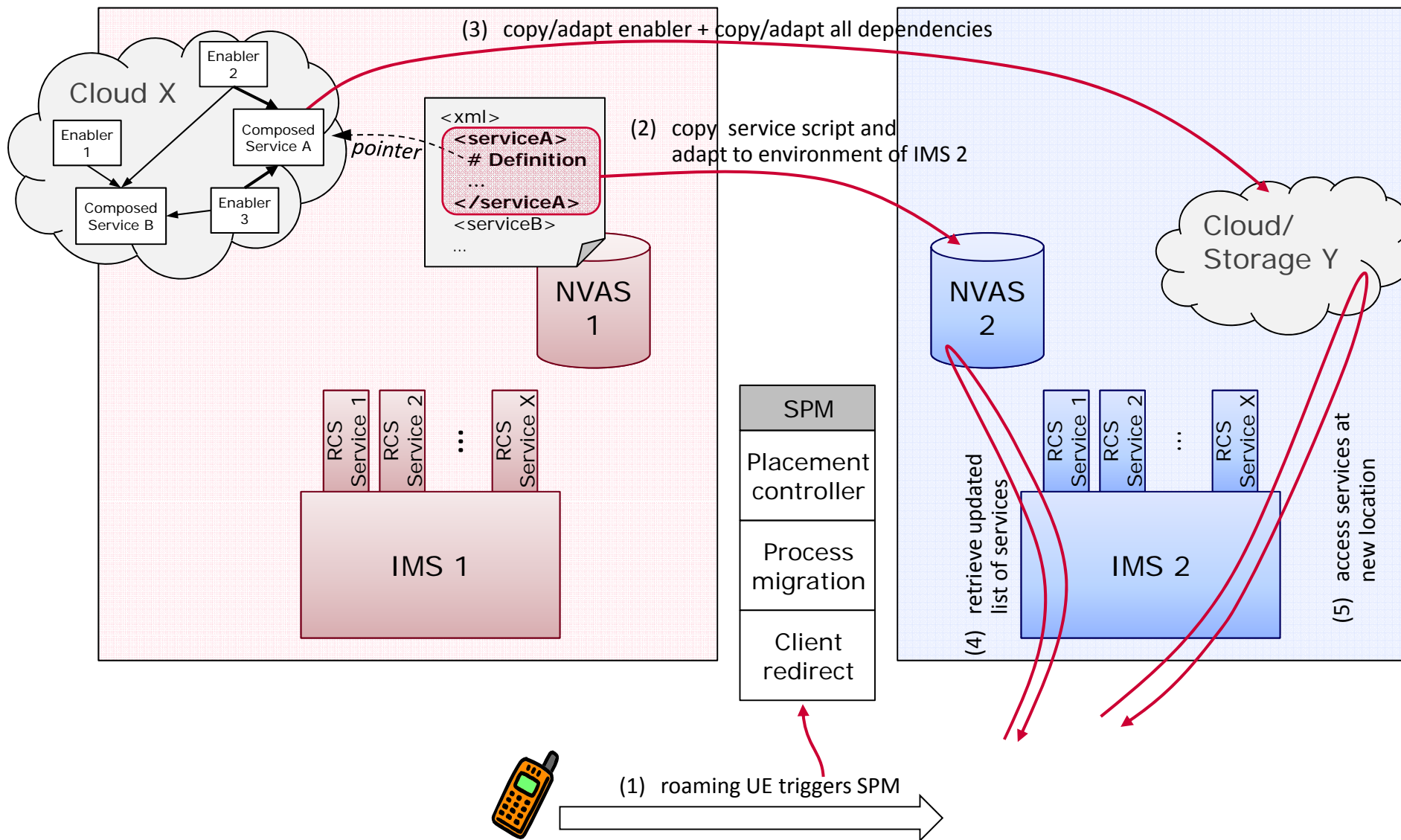
1. Film objects of interest
2. Send video to local server
  - Object recognition
  - Gather local information
  - Augment video stream
3. Stream augmented video  
➔ save latency and resources

ARS: augmented reality service



- Migration processor
  - coordinate migration, e.g. copy service and adapt to new environment
- Client redirection
  - redirect requests and client communication to new service location

# Example: SPM applied in an IMS environment





Moving the service to where it is needed/accessed results in:

- Service is executed „close“ to the user
  - Cost and resource savings for NTT docomo
    - Less data traffic in the mobile networks
    - Accommodate the immense increase of video traffic
  - Shorter delay
    - Improved quality of experience (QoE)
    - Enabler for new instant services
    - Higher competitiveness of NTT docomo
- SPM is beneficial for
  - bandwidth-intensive services, e.g. including video streams
  - delay-critical services, e.g. interactive services
  - localized services, using input from distributed data sources

**Harmonize** Social contribution beyond borders, across generations

**Evolve** Evolution of service and network

**Advance** Advance industries through convergence of service

**Relate** Creating joy through connections

**Trust** Support for safe, secure and comfortable living

**HEART**



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