



Contextual Multi-Device Delivery

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Single-Device Contextual Delivery : Benefits and Limitations



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- **Benefits: Device-specific downscaling of content**
 - Select device-specific content version
 - Device-specific content transcoding
- **Limitations: loss of “wow” factor**
 - Even the cleverest miniaturization makes the service less compelling
- **The multi-device delivery option**
 - User travels thru computing islands with multiple devices
 - Users have multi-device ‘toolbelts’
 - Service architecture treats computing island as single logical device

Components of multi-device orchestration



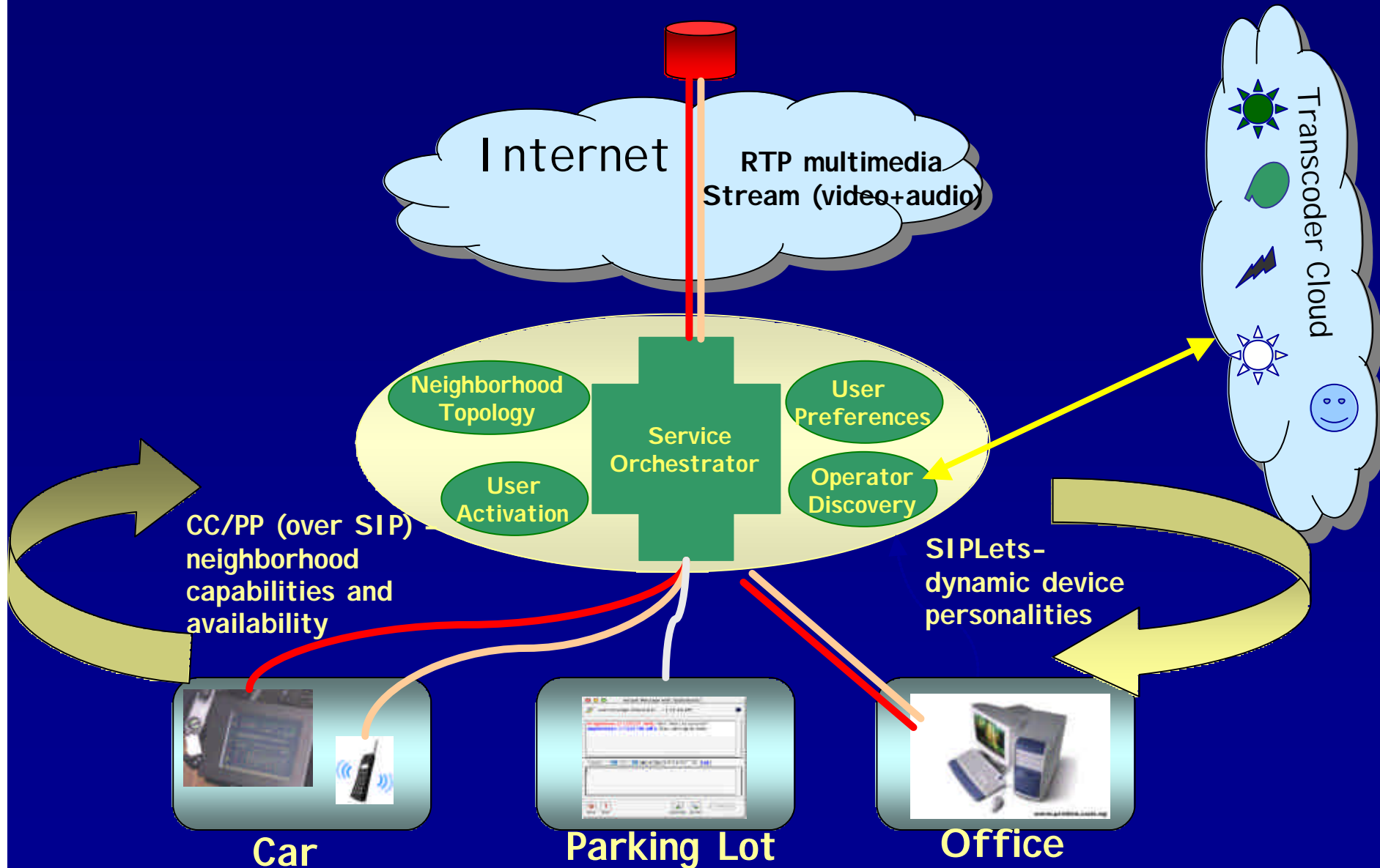
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- **axioms**
 - All-IP network, multiple access networks
 - Peer-to-peer (not c/s), not necessarily HTTP
 - Proxy (“edge box”) in the path
 - Devices as containers of downloadable plug-ins
- **aggregate capabilities of a device neighborhood**
 - inherent capabilities (model#, o/s)
 - resource availability (e.g. sound card)
 - environmental device attributes (e.g. device orientation)
- **user and content provider orchestration preferences**
 - Content provider - content re-targeting hints
 - User preferences - demultiplexing vs. transcoding, choice of access network
- **allowable device plug-ins**

CC/PP based Personal Mobility Solution



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CC/PP Perspective



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- **CC/PP model needs to include “pluggable” proxies**
 - Current proxies assume fixed operator set
- **Express capabilities of groups of devices**
 - Support delivery to a user, not a device
- **Metadata with shorter lifespans**
 - Resource availability (e.g. availability of audio card) can change rapidly
- **Expressing non-conventional device metadata**
 - e.g. device orientation
- **Support model of devices as containers**