



Thoughts on Future Content Delivery and the Future Internet

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CHIANTI Project



THE FUTURE OF THE INTERNET
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Slovensko predsedstvo EU 2008
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Background

- ❖ CHIANTI: Internet access in challenged environments
 - Access to services and contents

- ❖ Immediate need: highly mobile users (vehicles, trains, etc.)
 - Limitations in “always connected”
 - Dealing with imperfect (disrupted) connectivity

- ❖ Perspective: cooperative content sharing
 - Expanding to the mobile ad-hoc domain
 - From deserts to world championship finals

Content Availability/Accessibility is King



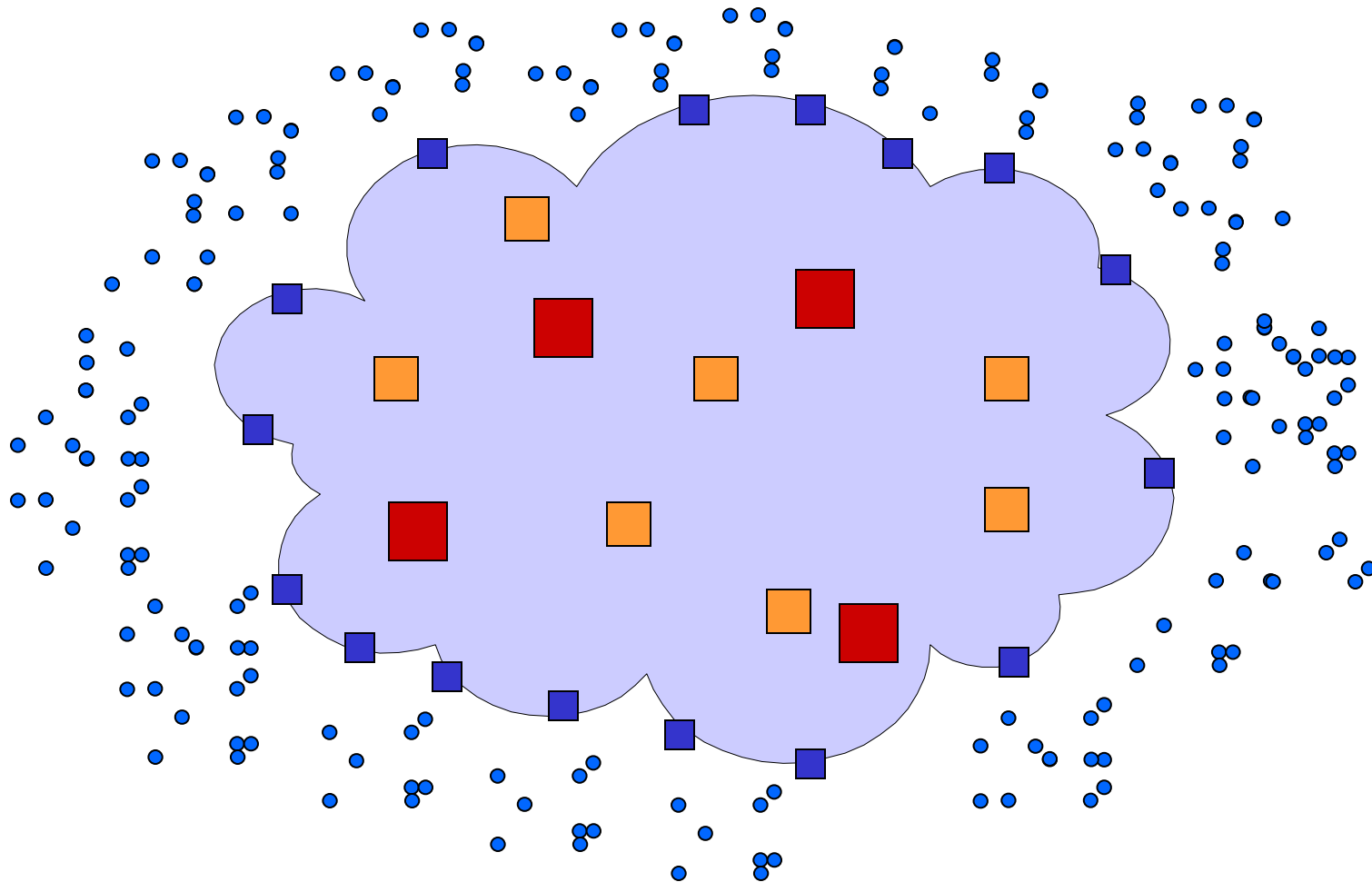
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Evolving towards Contents Networking



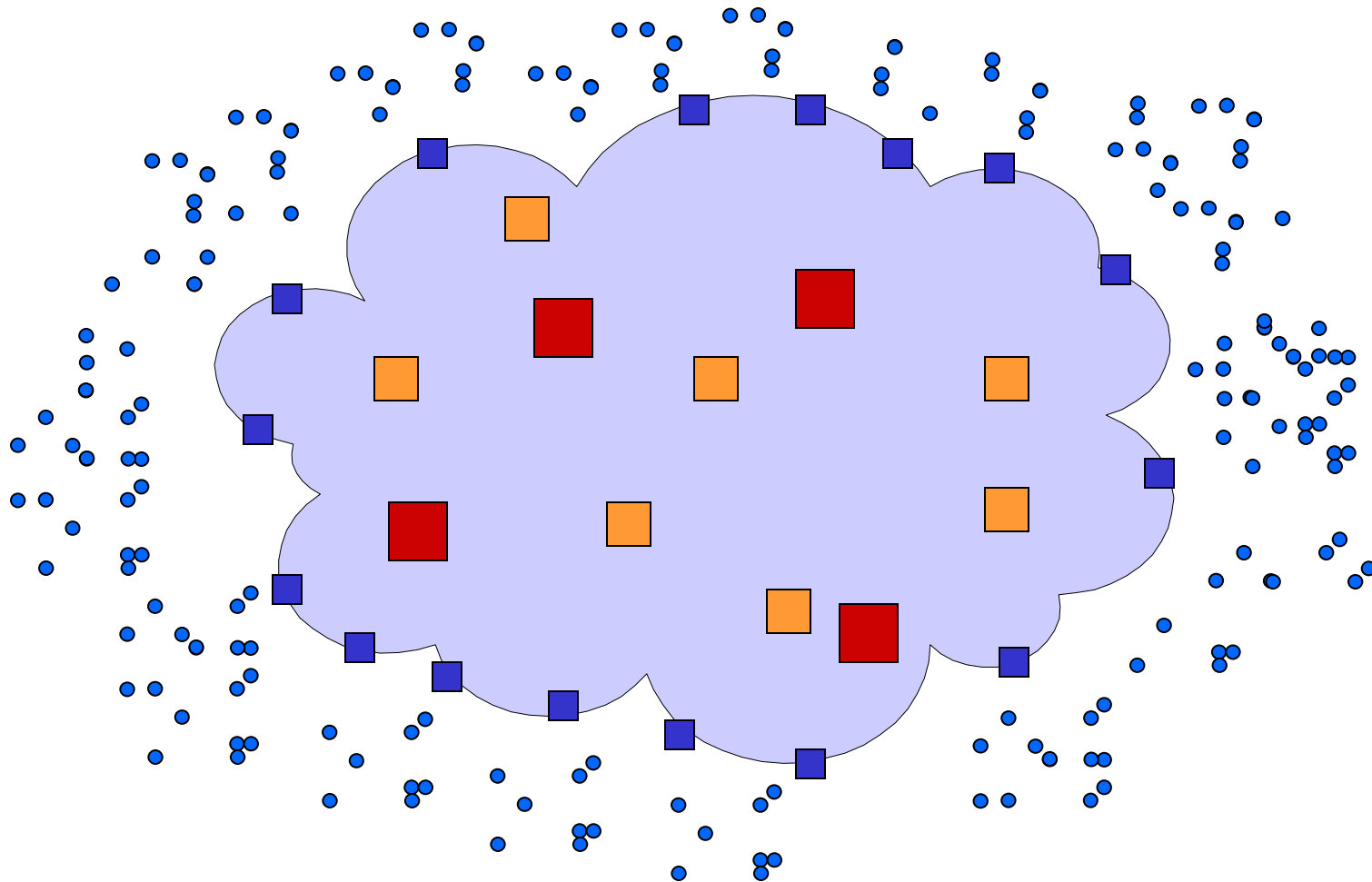
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Focusing on Content

- ❖ Detach the content from its provisioning infrastructure
 - Make the content move to where the demand is
- ❖ Redefining the role of the content/service provider
- ❖ User-generated content: towards content mediator
- ❖ “Autonomous” contents
 - Self-contained
 - Self-describing
 - Self-protecting
 - Self-replicating
 - ...
- ❖ Providing flexible network support





Some Research Issues...

- ❖ Where to support a common abstraction for content in the architecture?
 - The “waist” for content
 - Leave integration to the end points
 - Leave room for tussles and evolution

- ❖ Finding, locating, accessing, and publishing contents
 - Minimal content-independent functions
 - Probabilistic optimizations
 - Avoiding content dependencies

- ❖ Proper security mechanisms
 - Dealing with content adaptation while maintaining authenticity/integrity
 - Workable in a distributed fashion with and without infrastructure

- ❖ Policing: transparency, neutrality, censorship, traceability?

- ❖ Maintaining privacy!

