

# Group Communications at Concordia



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# Problem Statement

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- No one can make money using multicast
- Solution
  - Add Security
  - Add User Identification
  - Add (distributed) Accounting



# IETF Mboned Working Group

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- Multicast Accounting Requirements
  - draft-ietf-mboned-macct-req-04.txt
  
- Multicast AAA Framework
  - draft-ietf-mboned-multiaaa-framework-02.txt



# IETF Multicast Accounting Requirements

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- What is needed for a “fully AAA enabled IP multicast network”?
- Recognition that “proprietary solutions” are not desirable
- Recognition that requirements include provision of Quality of Service
- 14 identified functional requirements



# IETF Framework

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- Provides a framework for AAA
  - End User (EU)
  - Content Provider (CP)
  - Network Service Provider (NSP)

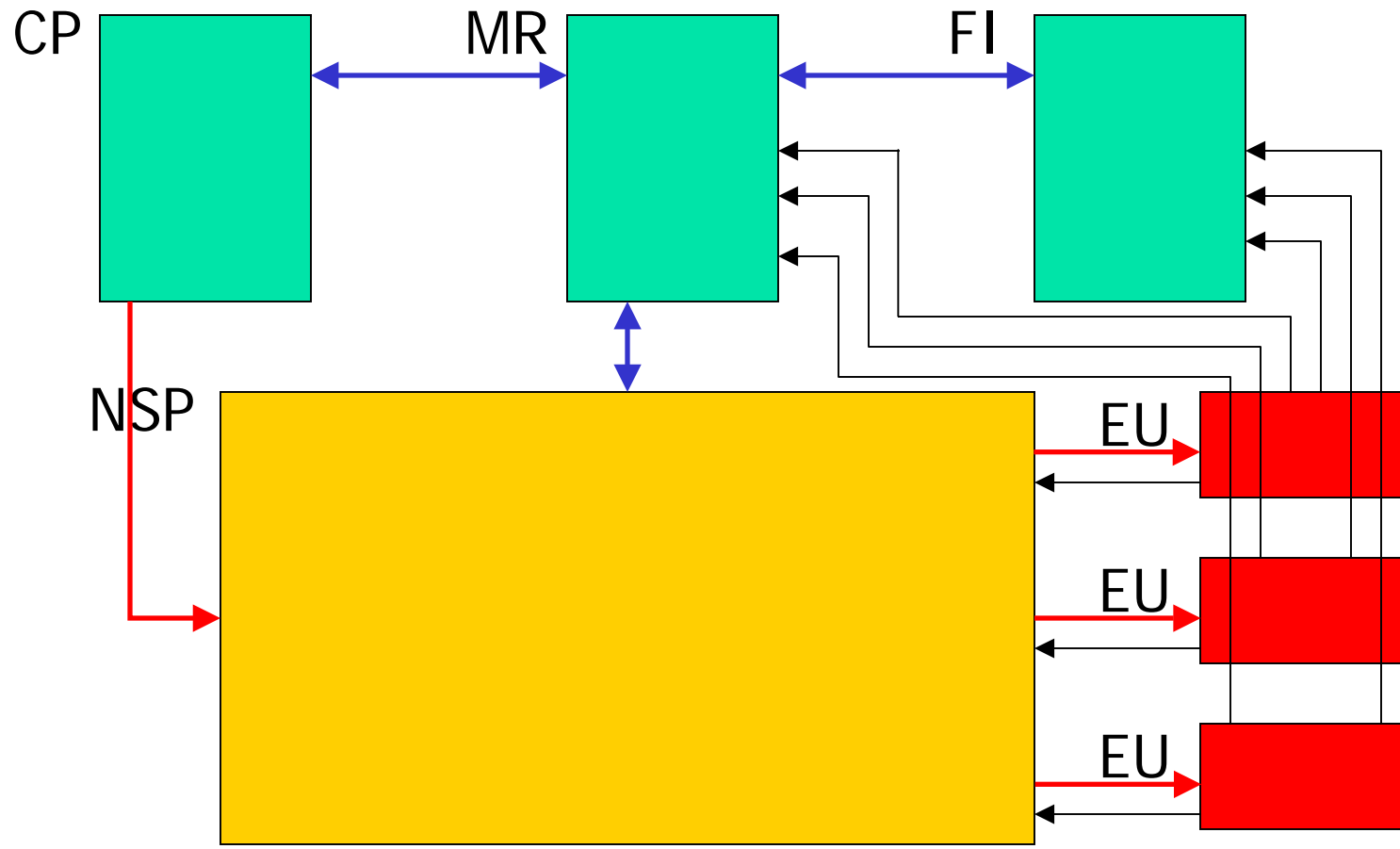


# An Architecture for Group Management

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- More interacting components than are discussed in the IETF work
- Actors
  - Content provider (CP)
  - Merchant (MR)
  - Financial Institution (FI)
  - Network Service Provider (NSP)
  - End User (EU)

# Component Interactions



Group Communications at  
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# Requirements

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- Identify participants (Authentication)
- Authorize Participants (Authorization)
- Account for resource usage
- Authenticate sender
- Confidentiality (if required)

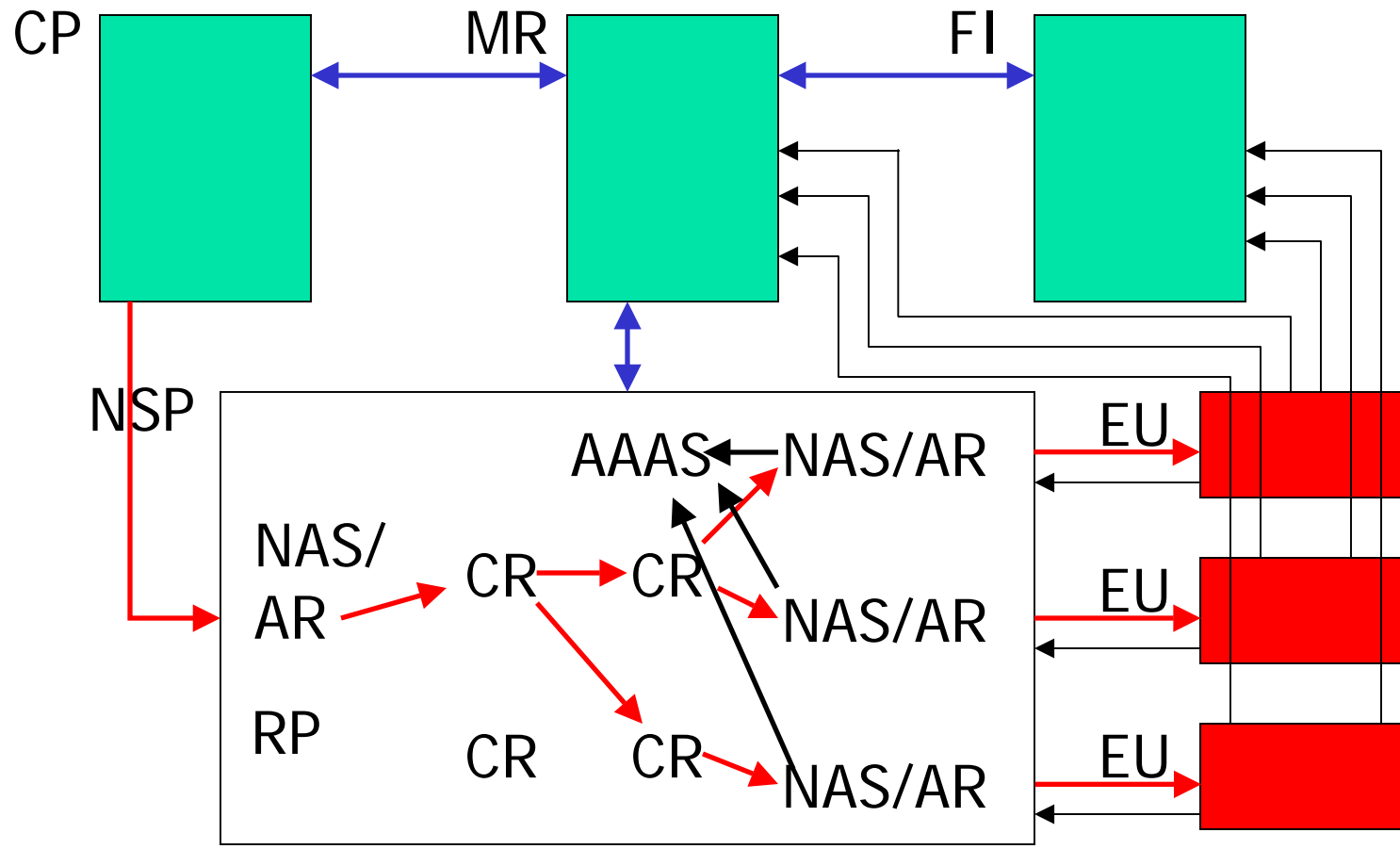


# Subdividing the CP and NSP

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- Content provider
  - Content server
- Network Service Provider
  - AAA Server
  - Core Routers
  - Access Routers

# Sequence of Actions





# Status 1

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- Key management
  - PhD Dissertation on use of Proxy Encryption completed
  - MCS Thesis on Packet Manipulation completed
  - Visiting colleague: paper on use of HIP



# Status 2

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- User Identification and AAA
  - MCS Thesis on EU/AR/AAAS interactions completed
  - PhD Dissertation on mechanisms and policies in progress – presented today



# Status 3

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- Deployment
  - PhD Dissertation on deployment strategies and mechanisms almost completed



# Status 4

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- Securing the business and financial interactions
  - MCS Thesis completed
  - PhD Dissertation beginning



# For more information

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- <http://users.encs.concordia.ca/~bill/hspl>
- [bill@cse.concordia.ca](mailto:bill@cse.concordia.ca)