

amsix



amsterdam internet exchange

# Video Working Group

RIPE54 EIX-WG

Tallinn, 8th May 2007

[cara.mascini@ams-ix.net](mailto:cara.mascini@ams-ix.net)

# Agenda

- Background
- Models
- Chosen direction
- Current situation



# Problem definition

- Exponential growth of (video) content online, both live and on-demand (in NL)
- Maximum capacity PO reached in Q2 2007 - others to follow
- Market parties requested shared solution

# Timeline

- Session 17/05/06
  - Workshop Streaming: What's next?
- AMS-IX GM 24/5/06
  - Formation of Video Working Group (VWG)
- Session 30/08/06
  - Interactive session, formation of subgroup
- Several Subgroup sessions
  - Development, prototyping

# Subgroup

- Why

- Development of 2 proposed scenario's from the session of 30th of August 2006

- Who

- RTL, PO, XS4all, SURFnet, Solcon, KPN, AMS-IX

# Model 1- Centralized platform

- Mutually owned platform - centralized investments
- Centrally operated video storage and play-out
  - Multiple and redundant servers for live and on-demand and multiple 10GE ports at AMS-IX
  - Multiple formats/codecs and several qualities

# Model 1 - Pro's & Con's

## Pro's

- Hassle free
- Cheaper with more participants
- Predictable costs (fixed monthly fee)

## Con's

- Organisational challenge
- Set-up time
- One provider
- No technology control

# Model 2 - Caching and redistribution

- Caching and redistribution inside ISP networks on the basis of standard protocol
- Open for anybody who adheres to the protocol
- Automated registration and distribution



# Model 2 - Pro's and Con's

## Pro's

- Agreement only on protocol
- Freedom of technology choice
- Multiple providers possible or self implementation
- Cheaper than centralized (depends on own implementation)
- Unlimited capacity

## Con's

- Less predictable costs
- Protocol (set of rules and technical implementation) to be developed
- Technical knowledge by parties necessary (if self)

# Current situation

- Model 2 was chosen in November 2006
- Subgroup further developed the premise & protocol
  - ready for prototyping in 2 weeks

# Premise

- Open protocol - working on any IP network
- Business deals are outside the scope of this WG
  - Participant distributors get better quality from participant contributors (main driver for ISP's)
- Not limited to encoding and streaming video formats.
- Varying quality options
  - PO 100k non-participants, 500k standard, optional high 1.8 Mb
  - Commercial broadcasters 2Mb up to
- Both live and on demand/Both streaming and downloads (On demand/downloads priority)
- Open to third party streaming providers (for 'small' ISPs)
- RFC-proof

# What's next ?

- Prototyping
- Further development
- Deployment
- RFC process



Questions?

