   - “Explicit Multicast (Xcast) Concepts and Options” issued.”
   - What we’ve achieve, at last?
2. Next step
   - XCAST as a building block of SAM
   - XCAST 2.0
RFC5058

What we’ve achieved, at last?

• Not achieved
  – Good usage, applications
  – Industrial products & services
  – Broad deployment

• Achievement
  – During discussion in SAM-RG
    • There are requirements, XCAST will not solve solely.
  – Get rough consensus discussing w/ RFC-editors & IESG
    • This is excellent and potentially very useful work. However, I would like to discuss how to move forward with regards to the proposed allocation of ... [ID-tracker, June 2007]
    • Design became old style for modern hardware routers. [RFC-editorial board]
XCAST as a building block of SAM
Pros. & Cons.

• **XCAST isn’t good**
  – No built-in signaling
  – No bridging for other mcast variations, yet.
  – No traffic adaptation mechanism

• **XCAST is good**
  – Keeping very huge number of group
  – Transmitter can select arbitrary sub-set of the group members of individual datagram
  – providing basic communication mechanisms necessary to realize ALM, OLM.
XCAST in SAMTK Architecture

SAMTK Group Web Server (Apache / PHP)

HTTP/XML

SAM Applications

Application Interface

SAMTK Core Module

Group Interface

Group Management Module

Protocol Interface

Hybrid Overlay Plugin

XCAST Plugin

ALM Plugin

Native mcast | AMT | Unicast

XCAST

OS (Windows / Mac / Linux / FreeBSD.. )
XCAST 2.0
<draft-ug-xcast20-protocol-spec-00.txt >

  - Submitted after RFC5058 issued
  - Modified points
    i. Move semi-permeable tunnel info from Hop-by-hop option to DSCP field of IPv6
       - Option header becomes performance neck w/ modern hardware routes.
    ii. Fixed length list of destination
    iii. Describe to clarify the detailed info for interoperation more than RFC5058.
  - Requirement for additional functions to support Hybrid Overlay framework is welcome!
XCAST 2.0
Implementation

• Operate system first, not spec first!!

• Firstly, with OSS
  – FreeBSD 6.X, Linux 2.6.XX
  – XCAST fan club will change the base from XCAST6-1.0 to 2.0, soon.

• XCAST 2.0 code will release integrated with SAM-TK

“Code then spec not Spec then Code”
Motto of Itojun