

# Preparation for IPv6 in JP

Izumi Okutani

Japan Network Information Center (JPNIC)

Izumi@nic.ad.jp

# Introduction

---

- This presentation introduces activities by stakeholders in JP in preparation for
  - The world after the exhaustion of unallocated RIR IPv4 address space
  - Deployment of IPv6 networks as its long term solution

# Major Players In Japan

---

## □ Government

➤ MIC



## □ Operators Community

➤ JANOG



## □ Industry Bodies

➤ IAjapan



➤ JAIPA...etc



## □ IPv6 Promotion Body

➤ IPv6 Promotion Council



# What We've Done So Far

## - Activities in 2007 -



社団法人 日本ネットワークインフォメーションセンター

Copyright © 2008 Japan Network Information Center

# Reports on IPv4 Exhaustion/Transfer

- Reports published by JPNIC (Dec 2007) and MIC (June 2008) as separate studies

- <http://www.nic.ad.jp/en/topics/2006/20060731-01.html> (JPNIC)
- [http://www.soumu.go.jp/joho\\_tsusin/eng/pdf/080617\\_1.pdf](http://www.soumu.go.jp/joho_tsusin/eng/pdf/080617_1.pdf) (MIC)
- [http://www.soumu.go.jp/joho\\_tsusin/eng/pdf/080617\\_2.pdf](http://www.soumu.go.jp/joho_tsusin/eng/pdf/080617_2.pdf) (MIC)

full

overview

- Both reports reached similar conclusion as a result of analysis

- Analysis of situation surrounding IPv4 exhaustion
- Listed issues, possible solutions and issues for each solution
- Concluded IPv6 is the effective long term solution after IPv4 address exhaustion

- MIC report makes further analysis on action plan broken down by categories of stakeholders

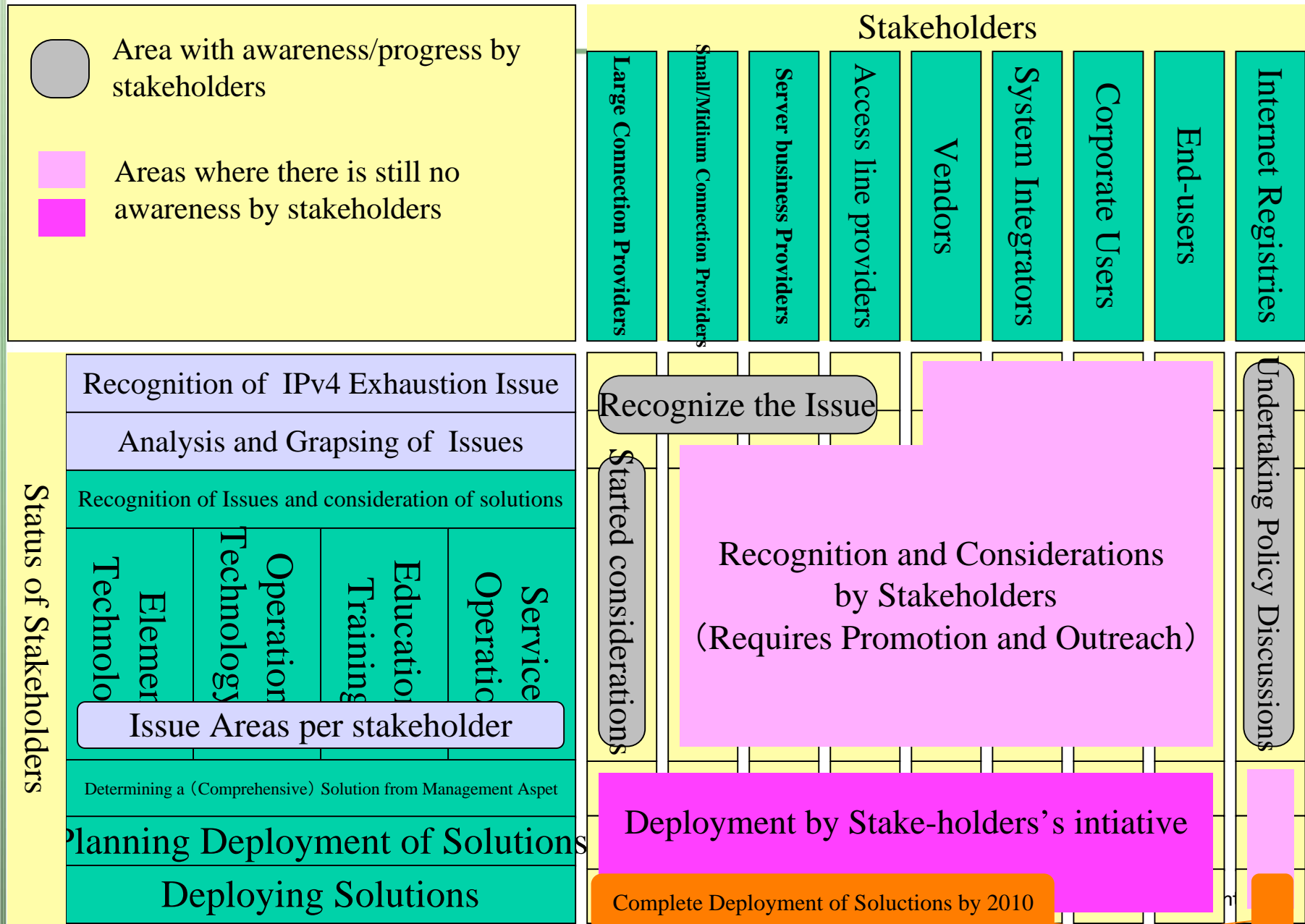
- Fixing specifications for interface between ISPs and “access providers” stated

# Activities by other bodies

---

- ❑ IAjapan (Internet Association Japan)
  - Consider formations for collaboration with other bodies its Committee
- ❑ IPv6 Promotion Council
  - Listing issues in IPv4/IPv6 Coexisting environment in its WG
- ❑ JAIPA (Japan Internet Provider Association)
  - Proposing & negotiating with NTT to support IPv6 in its FLETS service (which provides connection lines infra for ISPs)
- ❑ JANOG
  - Topics handling IPv4 exhaustion/IPv6 transfer discussed in every meeting since JANOG18 (2006.07)
- ❑ DISTIX (Distributed IX Project)
  - Working on technical issues in DNS/Translators in its WG
- ❑ JPNIC
  - Set up a website specialized to publish information related to IPv4 exhaustion

# Stakeholders and their status



# Overview of Year 2007

---

- ❑ Y2007 = the year of building awareness that IPv4 address exhaustion is approaching
- ❑ Reports from both MIC and JPNIC states IPv6 is the only long term solution
- ❑ Operators started looking more closely into preparation for IPv4 exhaustion + transfer to IPv6



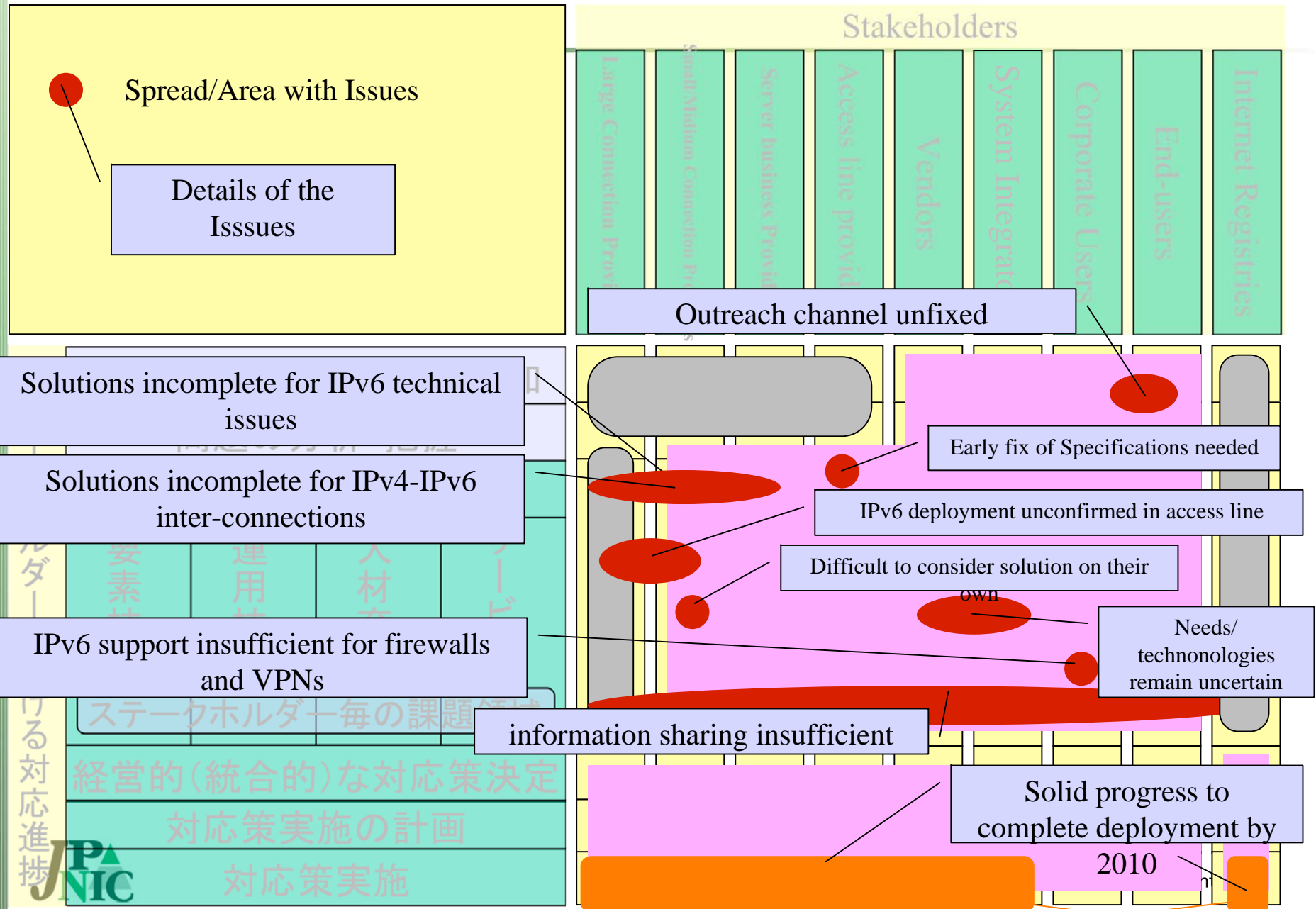
# Future Direction



社団法人 日本ネットワークインフォメーションセンター

Copyright © 2008 Japan Network Information Center

# Stakeholders and their remaining issues



# Remaining Issues

---

- Although there is higher awareness by major operators/LIRs on personal level...
  - IPv6 Deployment requires additional cost in short term and difficult to justify
  - Little real-life deployment experience in IPv6 and no sufficient expertise by vendors
  - Inter-connection technology between IPv4 and IPv6 is inevitable during the transfer phase, but no technology at production level
  - Service providers and vendors are watching and waiting to see the others to take action
  
- A collaborated activity is necessary as a break through from “watching to see what the others will do” state

# Theme for Year 2008

---

- “Collaboration by various industry players”
- Sharing Issues which cannot be solved by a particular sector and seek an integrated solution

# How we'll do this

---

- ❑ Set up a TF to make co-ordinated actions among all stakeholder groups
  
- ❑ IPv4 Address Exhaustion Solution Task Force
  - Various Internet bodies from Telco/CATV/Data Center/ISP Associations, JANOG, IPv6 Promotion Council, Internet Registry(JPNIC)
  - MIC participate as an observer

## The TF seeks to...

---

- ❑ Share information/issues which require collaboration with other groups
- ❑ Use PR channel of TF members to ensure awareness is raised in all stakeholder groups
- ❑ Each TF member will push their respective stakeholder group to come up with their action plan
- ❑ Have comprehensive progress management

# Current status

---

- ❑ Two Meetings held since its kick-off in July
  - 2008/07/14: Brief intro and general direction
  - 2008/07/28: Sharing issues by each TF member
  
- ❑ Working to have vendors and System Integrators to participate
  
- ❑ Press conference planned on 5<sup>th</sup> Sep

# Next Step

---

- Each stakeholder group to come up with action plans to prepare for IPv6 transfer within year 2008



# Q&A

---

