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An Expansionary Approach for the Allocation and Distribution of IPv6 Addresses

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Agenda

- Introduction
- Existing Internet address allocation model
- Need for an Alternative IPv6 address allocation model
- Proposed CIR Model
- Conclusion

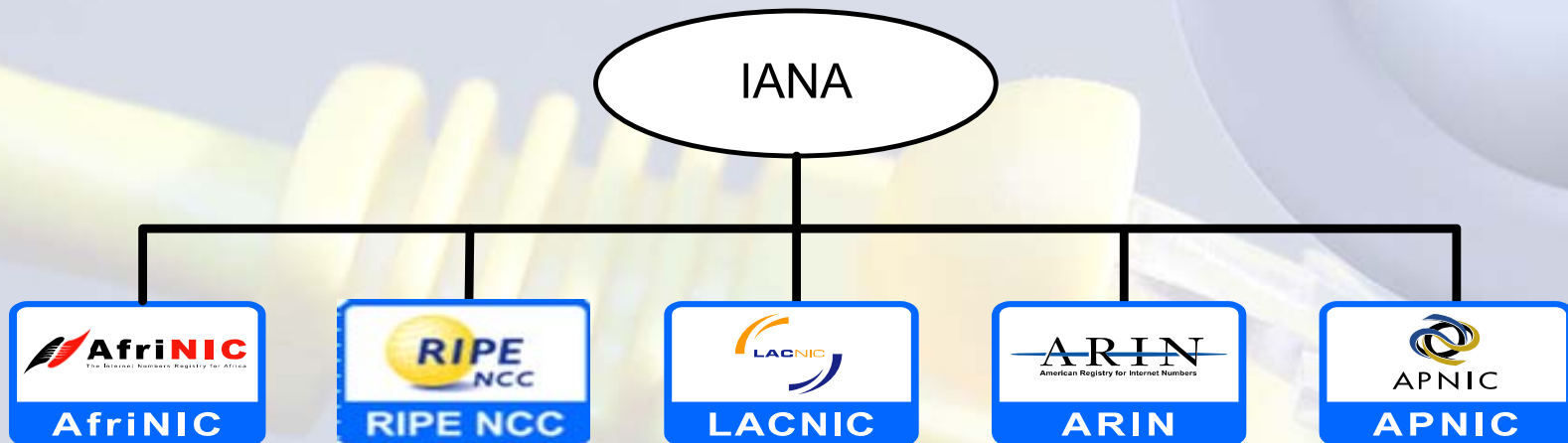
Introduction

- The Internet has evolved from a research based closed network to a social network used by everyone.
- Internet today is a large scale publicly available commercial and critical infrastructure.
- This study is a proposal to expand the current IP address allocation and distribution model wherein the users would have a choice from whom they want to get their IPv6 addresses.

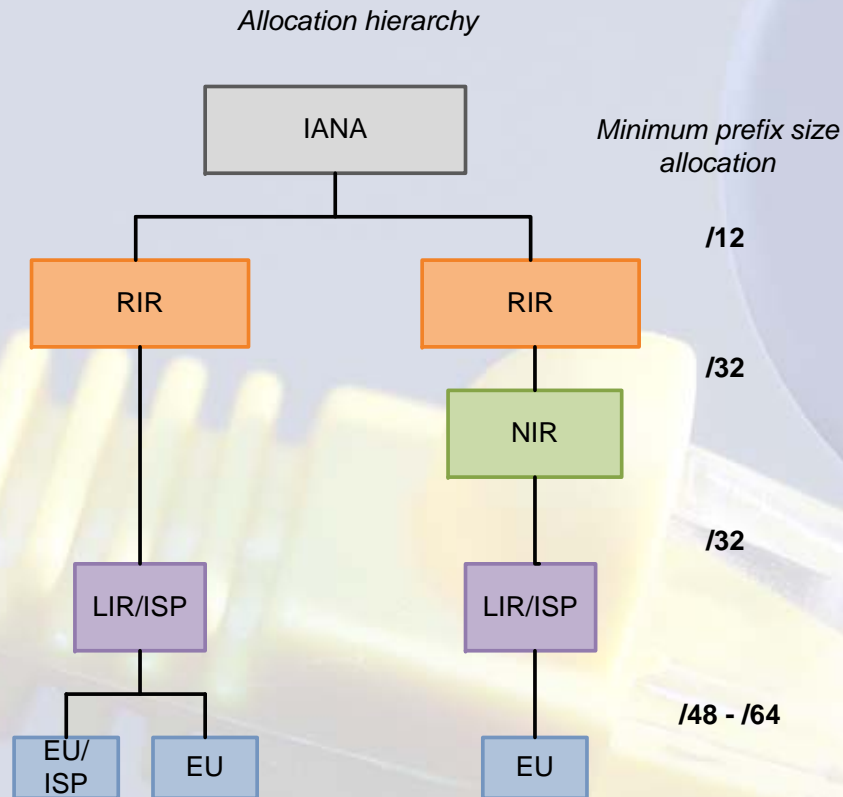
Need for an Expansionary IPv6 address allocation model

- In this model ICANN/IANA exist, but further expands the current RIR system on IPv6 address allocation by giving the users a choice.
- Creating more localized RIR and CIRs will lead to provisioning of better and more competitive services to the Internet community
- To have more relevant and equal participation in the IPv6 address allocation policy development by local Internet communities
- To meet the local needs of the users better by providing local language content, systems and training
- To achieve more fairly balanced aggregation and conservation goals of IPv6 addresses as local entities know the local requesting organizations better.
- To provide better support and awareness programs to help move the IPv6 agenda, especially for the developing nations in the region.

Existing Internet Address Allocation Model

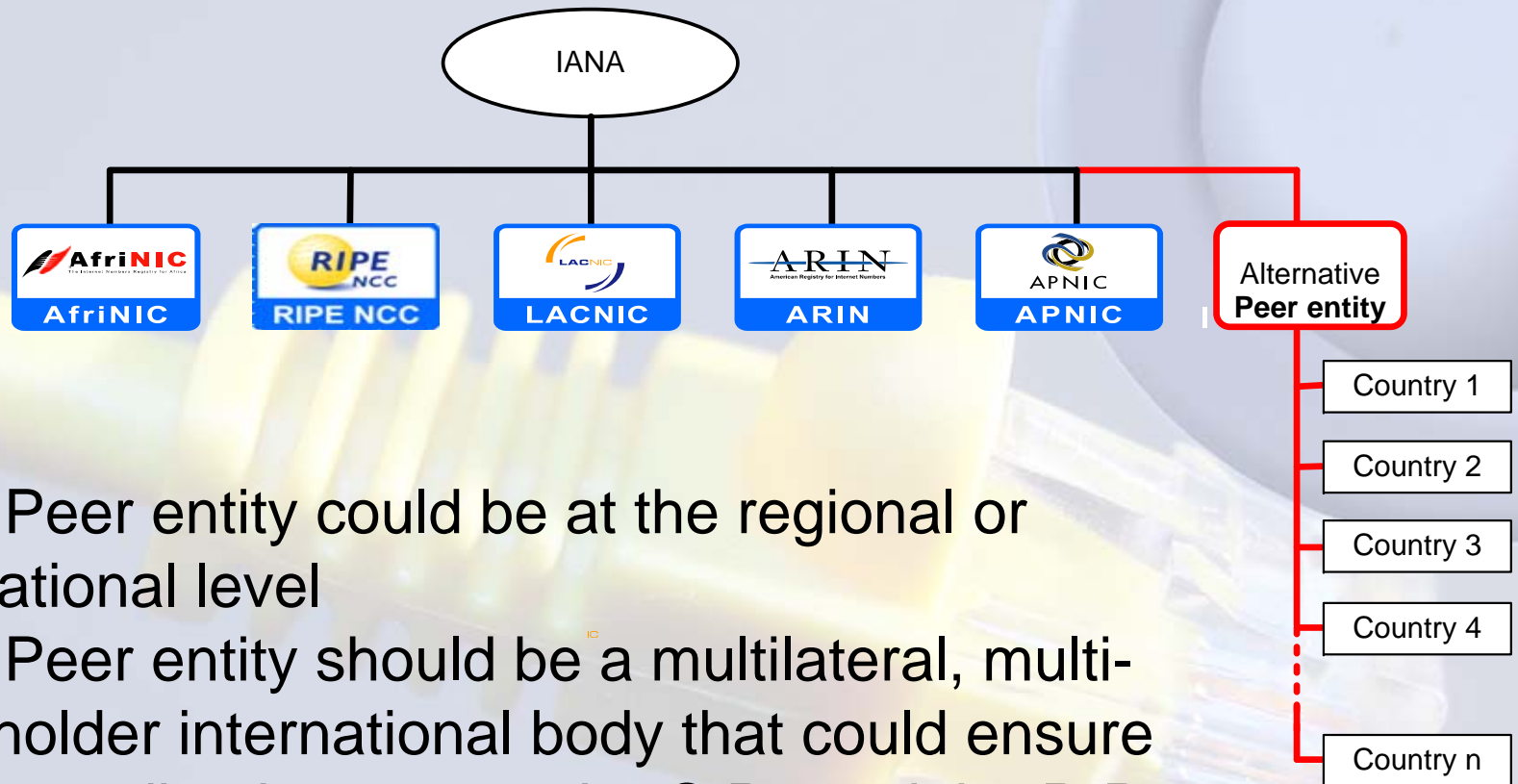


Current IPv6 Address allocation hierarchy and policies on sizes



IANA – Internet Assigned Number Authority
 RIR – Regional Internet Registries
 NIR – National Internet Registries
 LIR – Local Internet Registries
 ISP – Internet Service Providers
 EU – End User

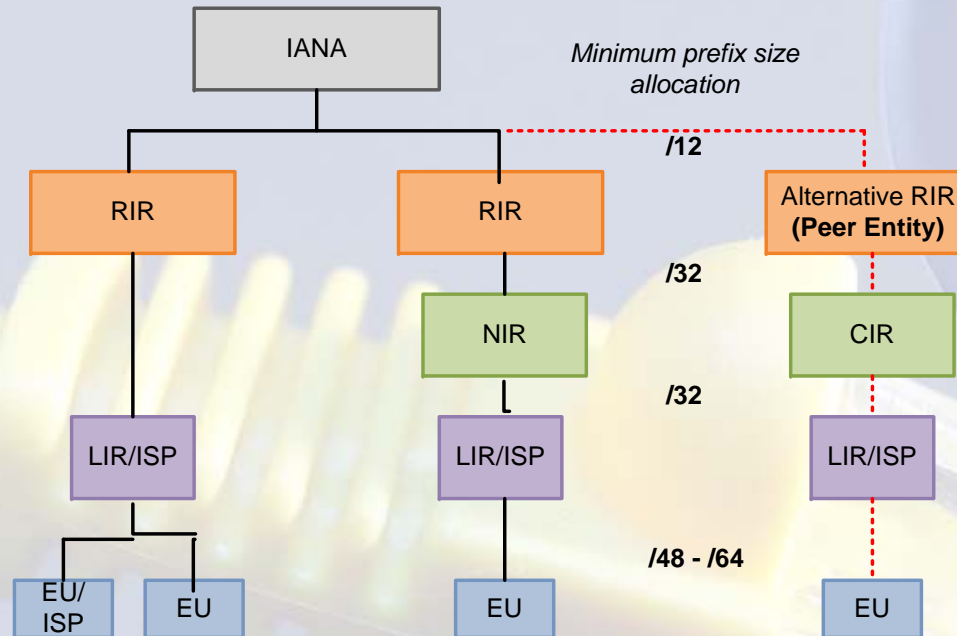
Proposed Country Internet Registry (CIR) model



- The Peer entity could be at the regional or international level
- The Peer entity should be a multilateral, multi-stakeholder international body that could ensure close coordination among the CIRs and the RIRs.

Proposed IPv6 Address Allocation hierarchy and policies on size

Allocation hierarchy



IANA – Internet Assigned Number Authority
RIR – Regional Internet Registries
ITU – International Telecommunication Union
NIR – National Internet Registries
CIR – Country based Internet Registries
LIR – Local Internet Registries
ISP – Internet Service Providers
EU – End User

The CIR model (1/4)

- The Peer entity would serve in addition to the existing RIRs
- The policies followed by the CIRs would be in close cooperation with the existing RIRs with specific interest to satisfy the local needs of the users
- Would adhere to the technical aspects of the Internet – address conservation, aggregation and registration

The CIR model (2/4)

- Does not disturb the existing infrastructure nor introduces any new infrastructure
- There would be no additional fragmentation
- Overall number of prefixes added to the core routing table would be the same or trivial
- *As such the CIR model would not impact or threaten the global Internet stability and routability*

The CIR model (3/4)

- A CIR being closer to the user
 - could check on the credentials of the applicants in assessing their IPv6 address needs
 - can provide more fairly balanced aggregation and conservation through proper allocation of needed address space to the end sites
 - would be able to better satisfy the local needs of the user
 - multilingual local language support and localized helpdesk

The CIR model (4/4)

- CIRs would value add to the RIRs and benefit the users by differentiation of services.
- CIRs would have more relevant and equal participation in the policy formation and resource distribution so that Internet resource distribution and decentralization are more balanced.
- Implementing CIRs would facilitate more equitable access to Internet resources especially with non-English speaking countries, providing greater accessibility to the Internet to all.

Conclusion

- The effort RIRs have contributed in the foundation and early growth of the Internet is appreciated
- But we have to move with time
 - In creating the Next Generation Internet
 - An Internet that is open and non-monopolistic
 - An Internet where the users have a freedom of choice
 - An Internet that is democratic and provides fair distribution of IPv6 addresses

“The proposed CIR model is in the greater interest of the Internet and the netizens moving towards a fairly open, non-monopolized and democracy in governing the Internet.”

Thank You

Q&A

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