



Bundesministerium  
des Innern

# IPv6 in Germany

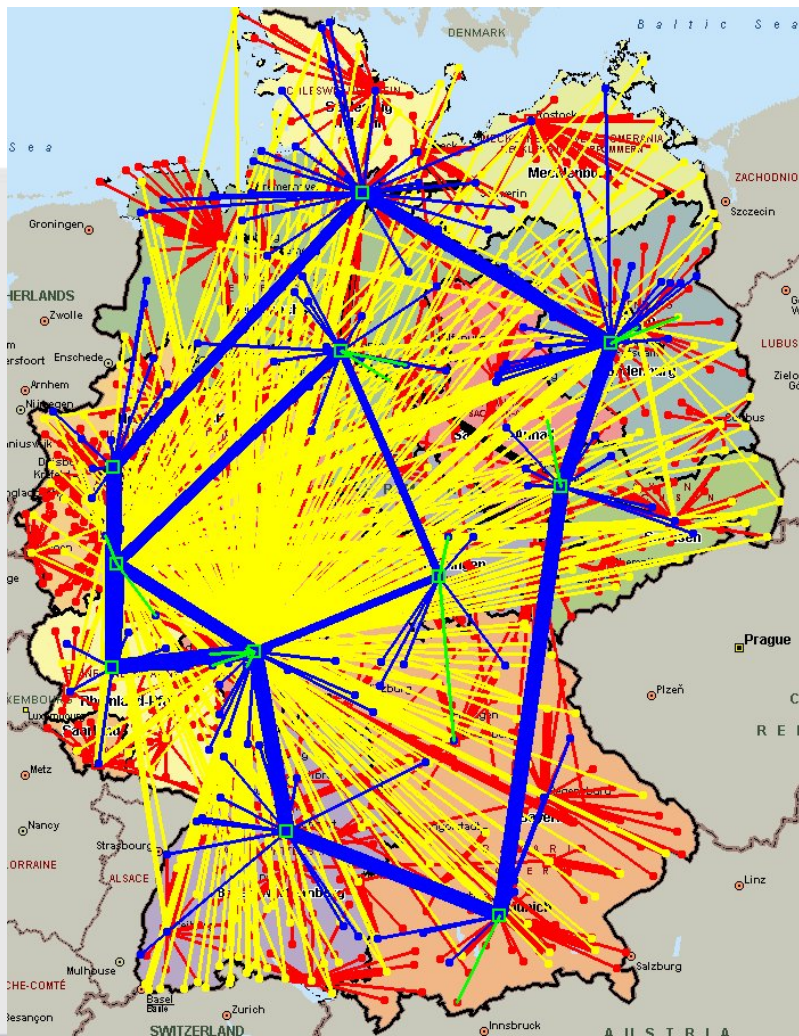
Constanze Bürger

Ministry of the Interior

department Communication infrastructures and IT-  
securitymanagement of the federation



@ the beginning



**„Big picture“ of the  
WAN infrastructure  
of the federation  
layer**



# @ the beginning

two projects with the aim to setup new modern  
secure networks

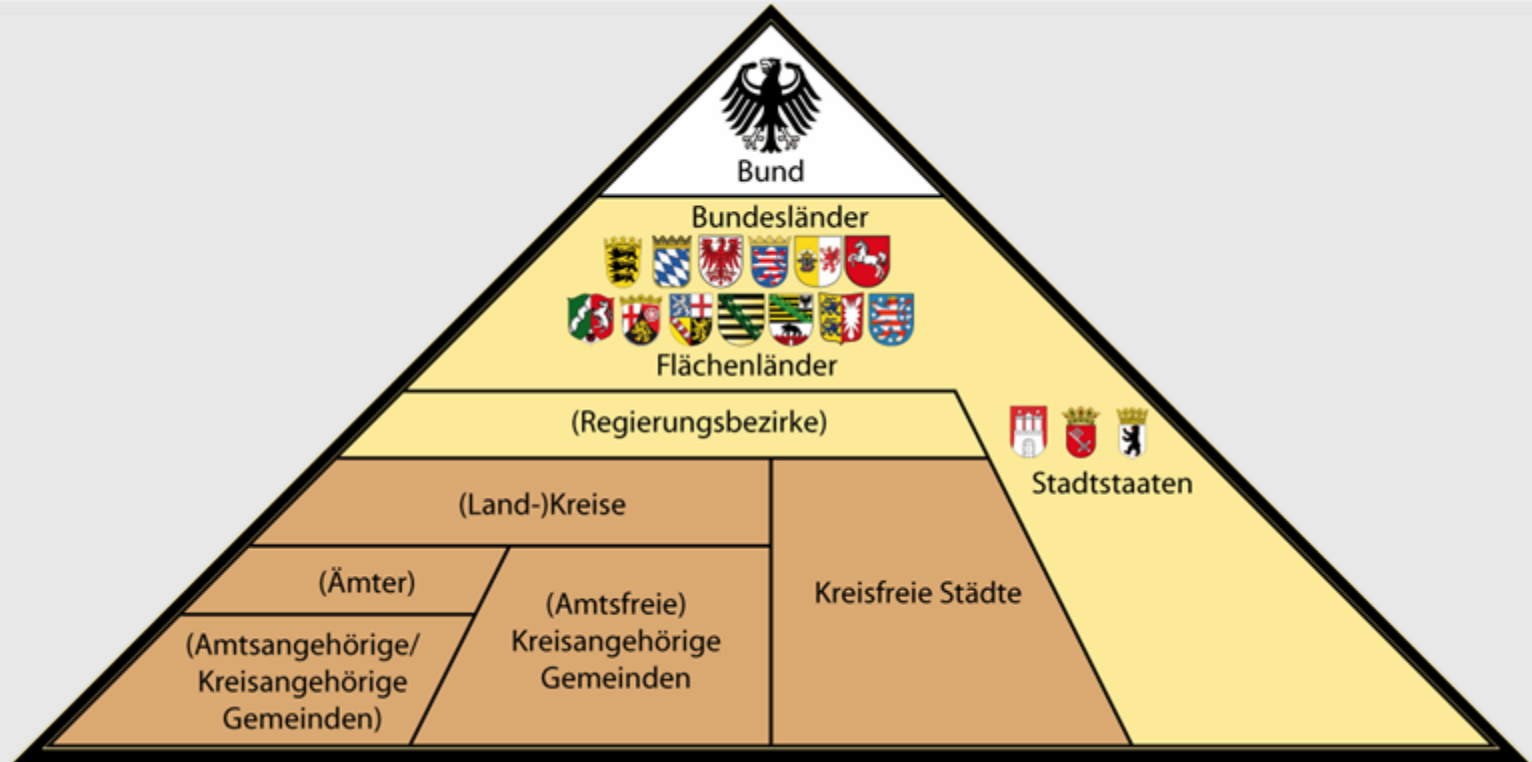
for the federal-governement started in 2007 (NdB),  
and states and communities started in 2006 (DOI)

One key element of this architecture proposal was  
the use of IPv6 to get rid of NAT and the multiple  
uses of private IPv4 address spaces.



challenge:

# federal System of Germany

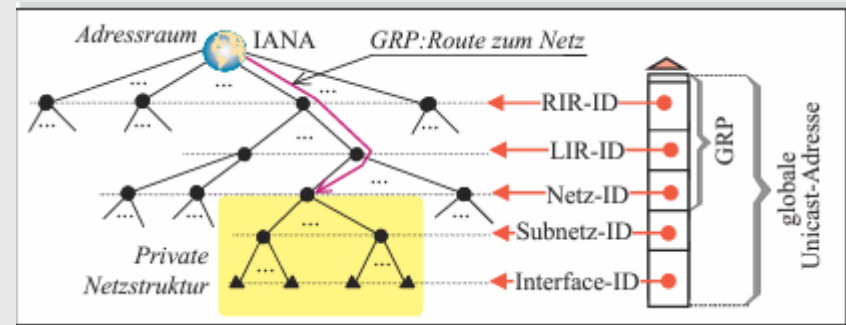


Q.: David Liuzzo



# RIPE NCC Policy for IPv6

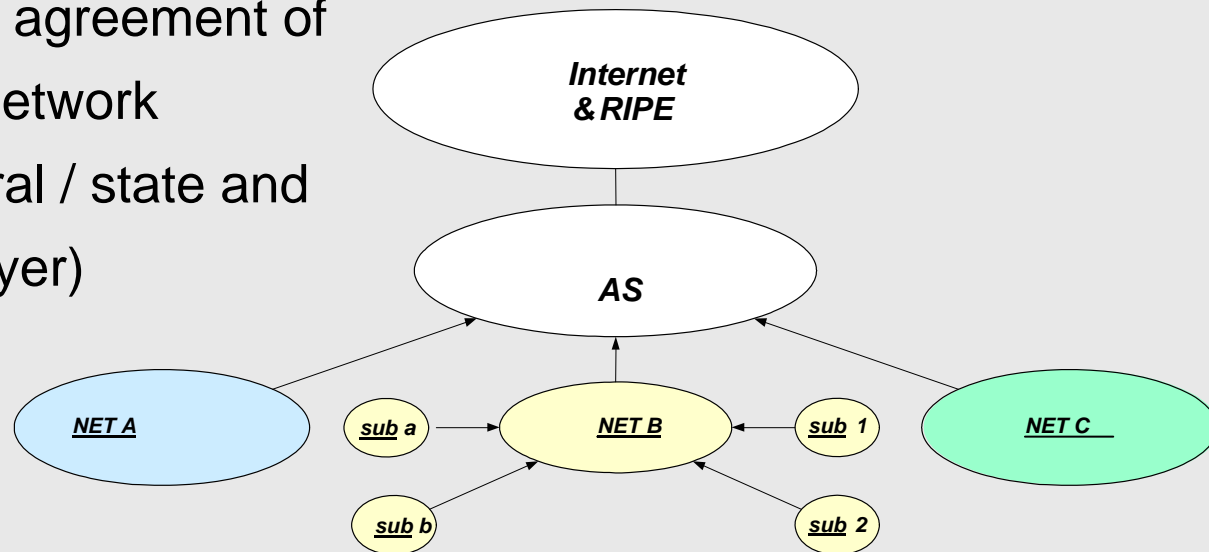
- Hierarchical routing / routing aggregation
- Only PI space for a LIR
- LIR give PA assignments
- This policy was not designed for governments with a federal system and will need some technical and political decisions





# Technical Proposals to fulfil the Rules of RIPE NCC Policy

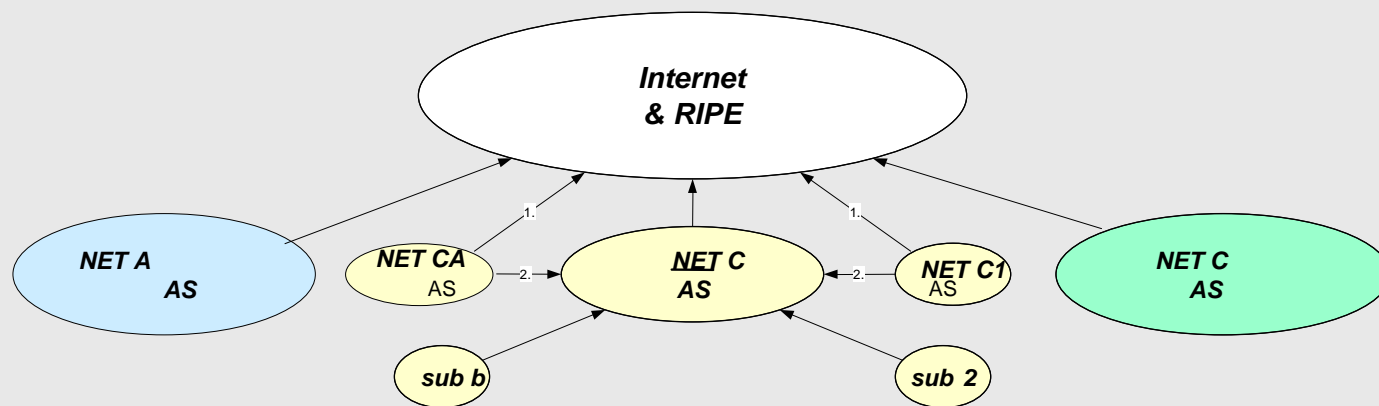
- One LIR with a  
autonomous system (AS)
- Is needing an agreement of  
all the other network  
owners (federal / state and  
community layer)





# Wish-Architecture

- n\* LIR's with own routing policies





# IT Security / BSI

- We have to sensitize the security market for this task and the special requirements of governments
- We have to fulfill the requirements of the BSI
- We will need BSI conform security products
  - **Certified Firewalls**
  - **Hardware and software encryption**
  - **Stable IPv6 solutions**
  - **An holistic migration concept, also for the operation**



Bundesministerium  
des Innern



**Thank you  
for  
your attention!**