Common Components – What are they and how to define them?

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Common Components – Example: Internet

- Switch
- Network Cards
- Router
- WLAN Router
- Modem
- DSL Router
- IP
- DNS
- TCP
- ...
Is a WLAN access point a common component?

Yes – one instance can be replaced by another one.
Why is it a common component?

- Has well-defined task(s)
  - “Take an incoming data package and forward it to its destination.”
  - Don't care how the task is done internally!
  - Additional or special functionality possible
    - NAT, Firewalling ...
  - Different service levels
Why is it a common component?

- Uses well-defined interfaces
  - Ethernet cable with RJ45
  - Wireless IEEE 802.11x
  - ...

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Why is it a common component?

- Uses well defined standards (protocols)
  - Many standards in networking
  - TCP, UDP, IP, Ethernet, BGP ...
Why is it a common component?

- Based on a common model
  - Open Systems Interconnection model - OSI layers
  - Defines tasks
  - Does not define underlying internal structure and technology

© http://www.gargasz.info/osi-model-how-internet-works/
How to get to common components?

- All about “well-defined”
  - How to get to “well-defined”?
    - Its a hard and long way!
    - Needs communication!
      - Discussions
      - Proposals
      - Compromises
      - Common agreements
      - …
  - Is RDA the right place for it? - yes
How to get to common components?

- How to get to “well-defined”?
  - Standardization
    - By law – 1982: TCP/IP declared standard for all military computer networking by US Department of Defence
    - By usage – VHS tapes vs Betamax
    - Standardization organisations
    - Is RDA the right place for it? Is RDA as strong as W3C, IETF …?
A common component

- has a well-defined task
- uses well-defined interfaces
- uses well-defined standards
- is based on a common model

Are these enough?

Is RDA enough to get to common components? How to make RDA the place for it?