Tizen, Security and The Internet of Things

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- Security Dinosaur
- Smack Linux Security Module
- Manager Tizen and Linux Kernel Security

Tizen

- Linux based operating system
- Project of the Linux Foundation
- Lead by Samsung and Intel

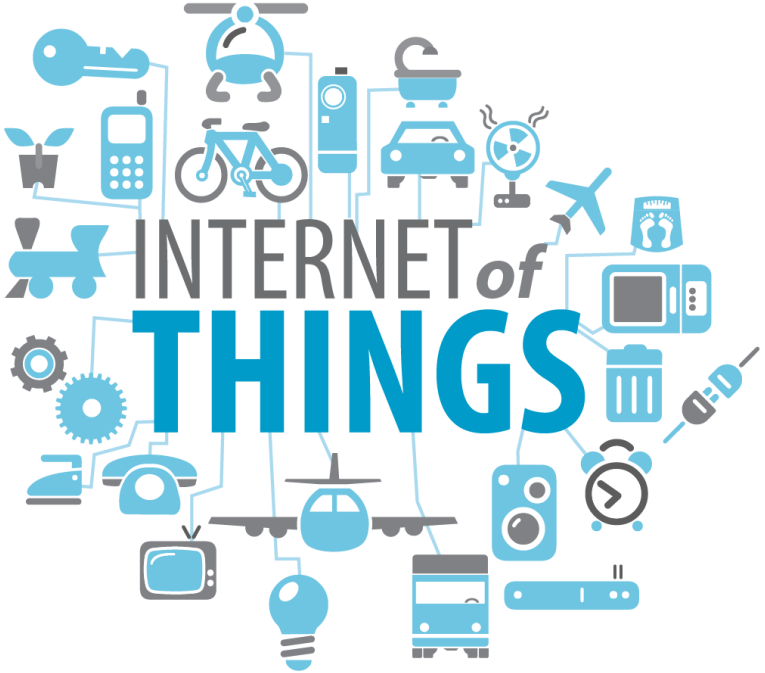
Security

- Does what it’s supposed to
- Doesn’t do anything else

- Know the difference

Internet of Things

- Collection of computing devices
- Heterogeneous
- Autonomous



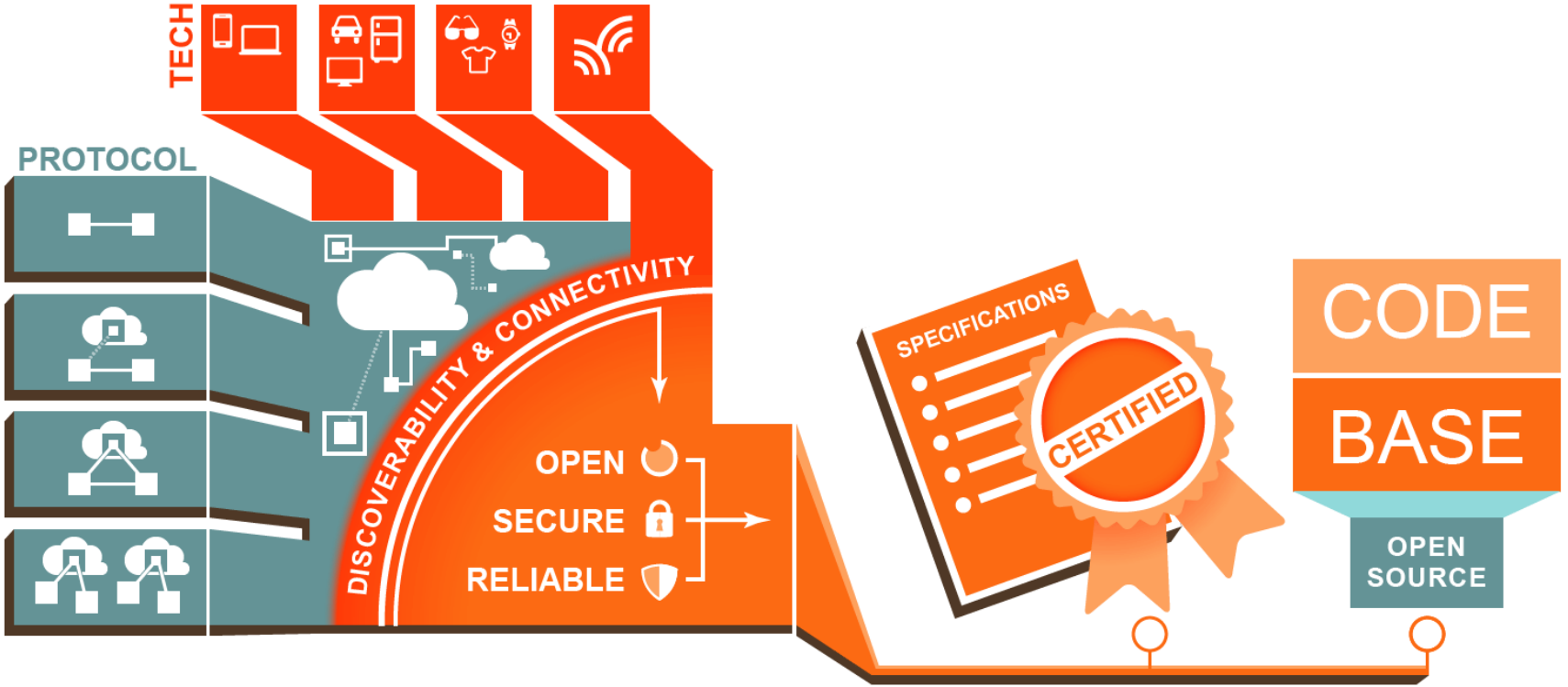
Things

- Just want to perform their function
- Not primarily computers

Things need to communicate

- Willing to talk to anyone
- Wide variety of “networks”
- Free from traditional administration

OPEN INTERCONNECT CONSORTIUM



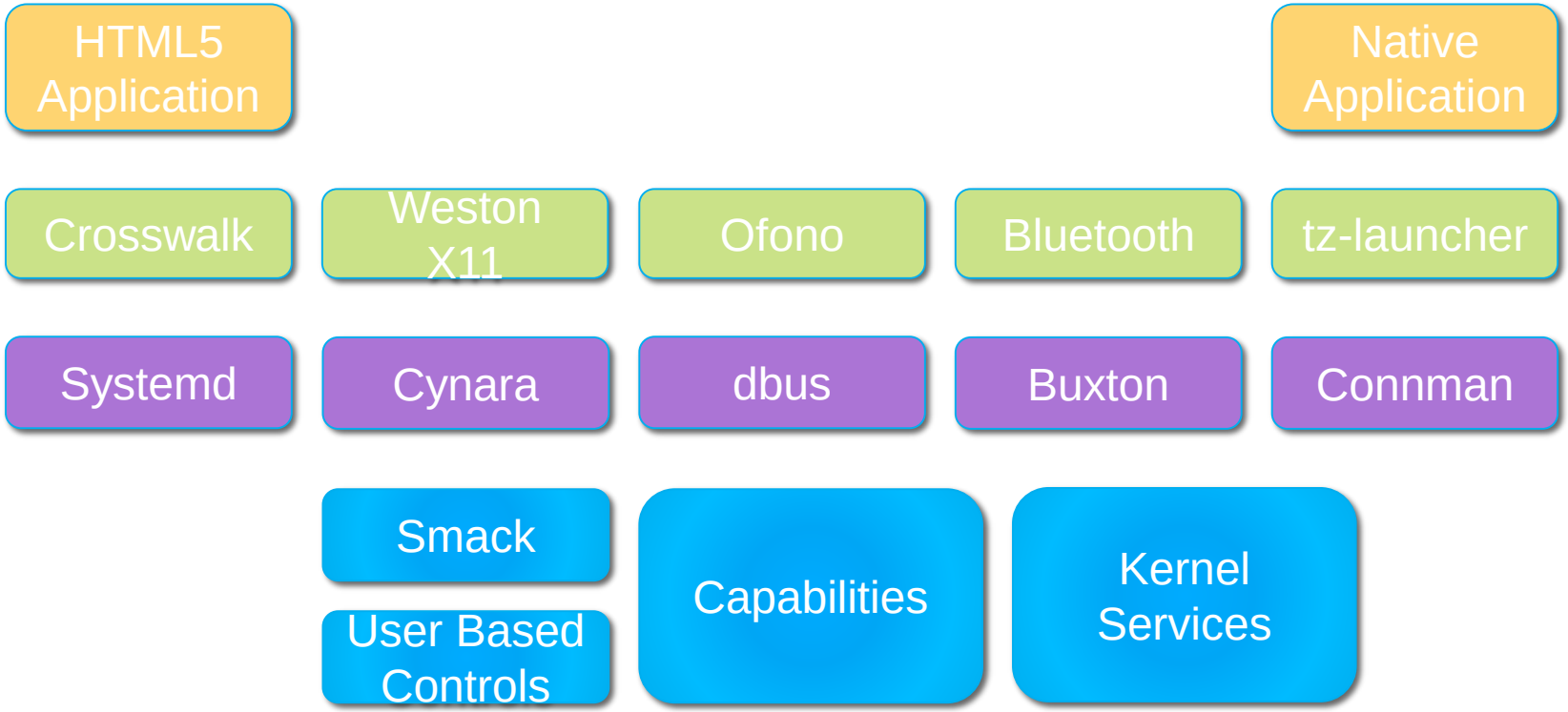
How a Device Views the Internet of Things

- Wisdom
- Danger

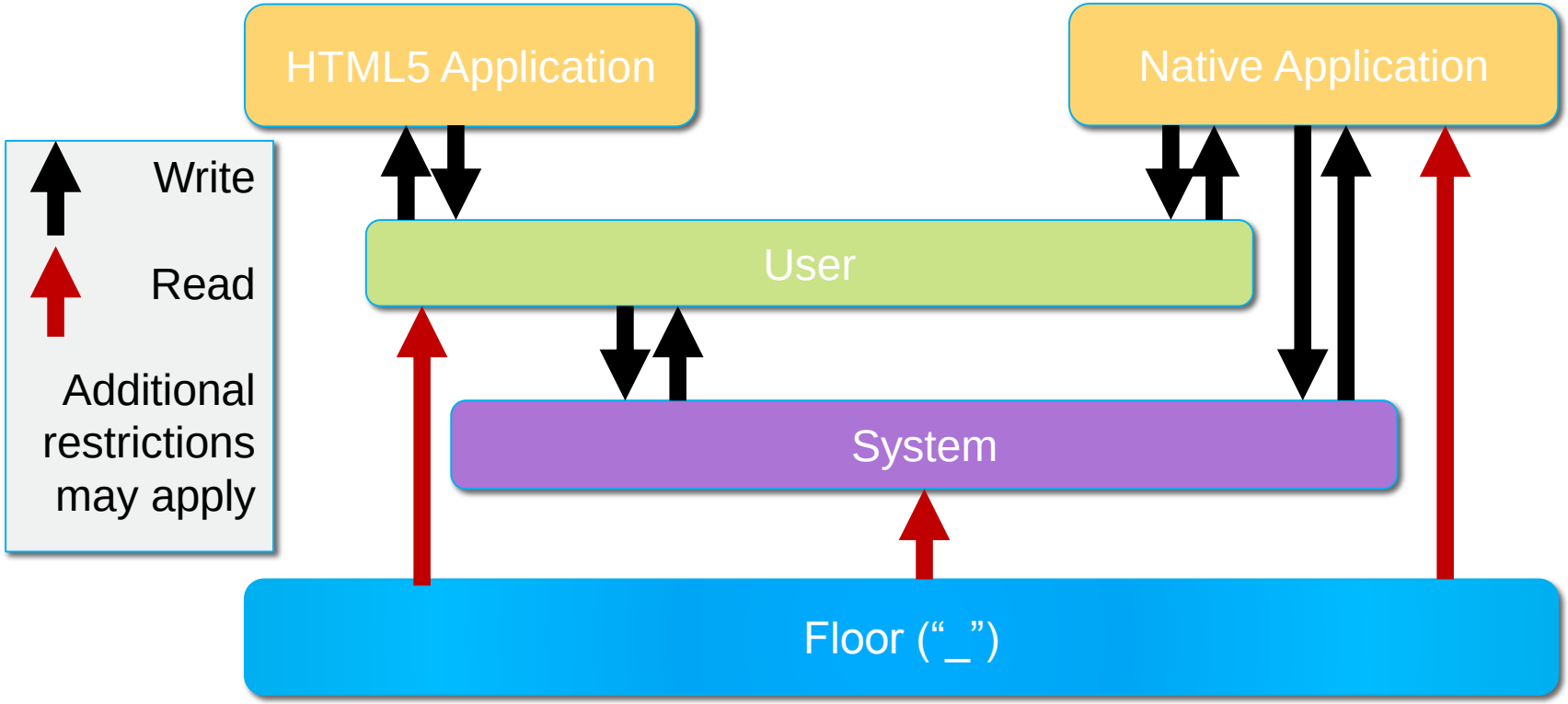
Back To Tizen

- Linux distribution for devices
- Collection of profiles
- Common security base

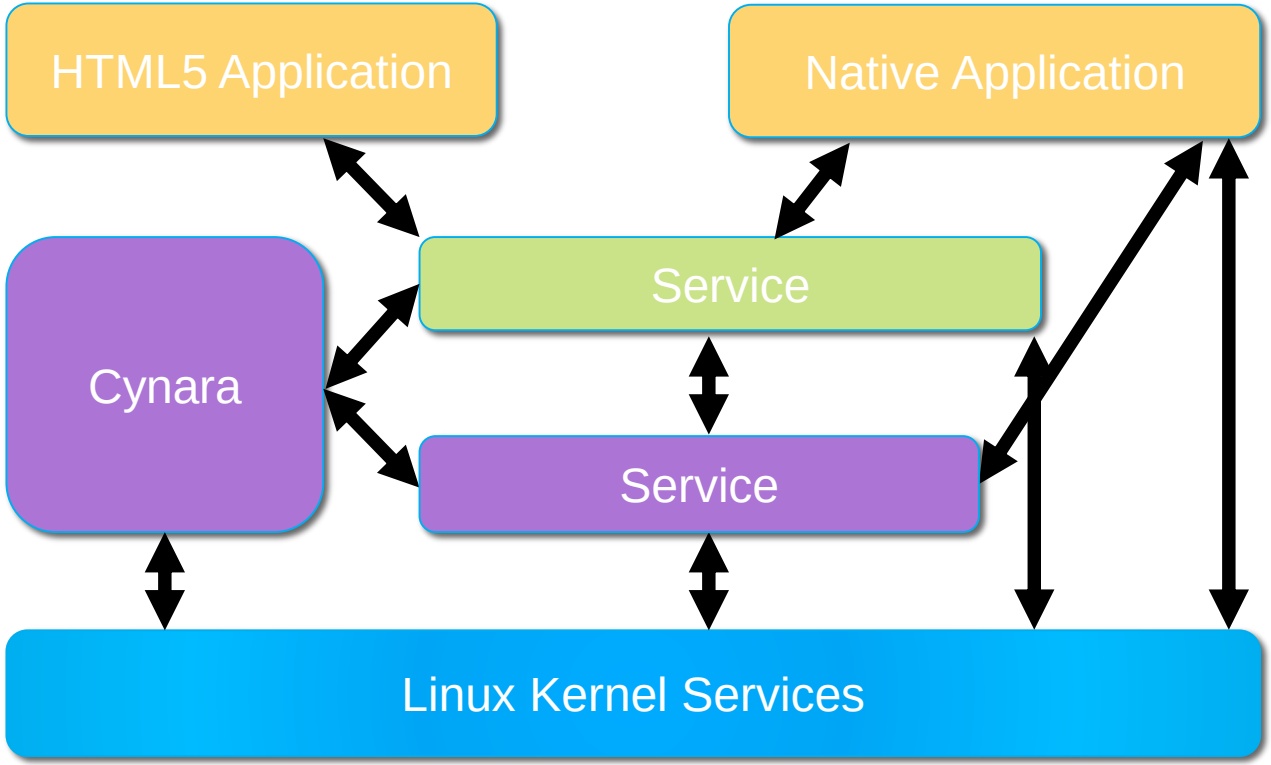
Tizen Security Basics



Tizen Three Domain Security



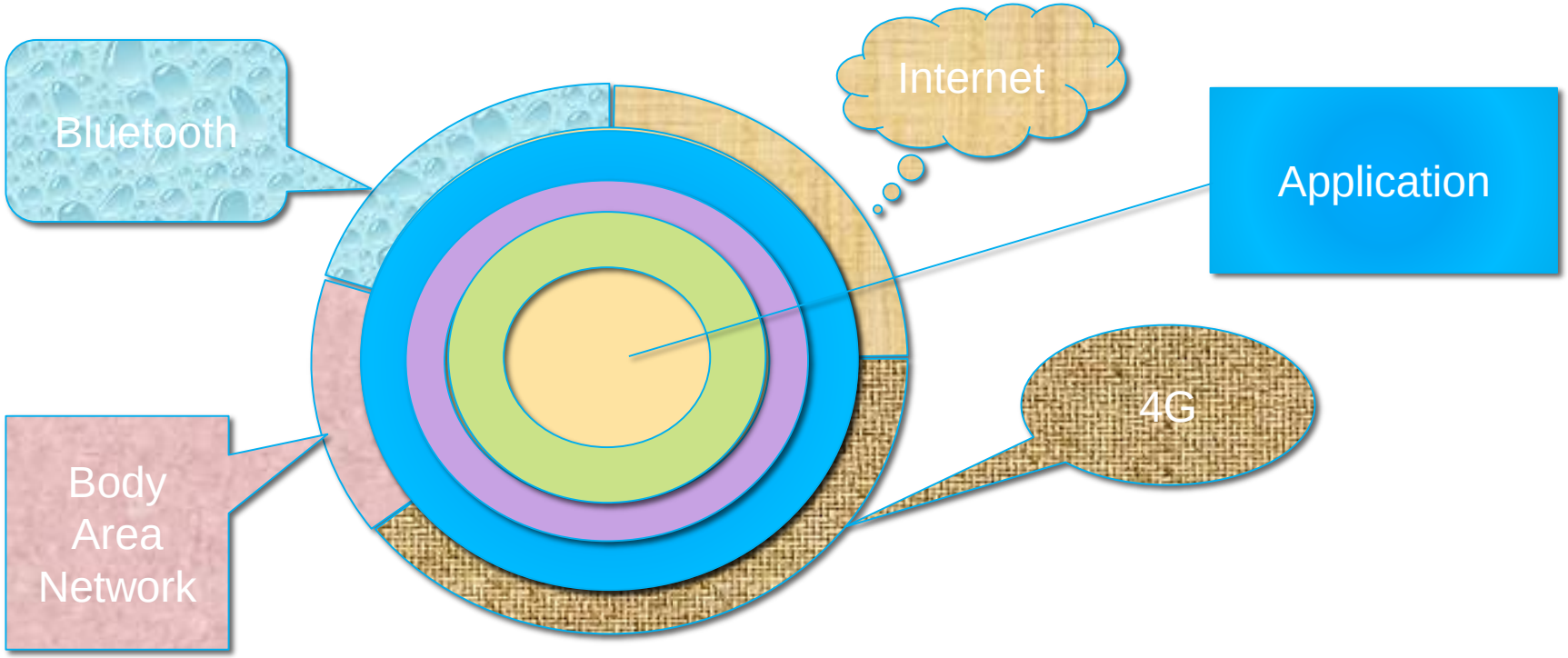
Tizen Application Privileges



Application Privilege Attributes

- Name of the privilege
  - http://tizen.org/privilege/vibrator
- Smack label of requester
  - RaunchyRhinos
- UID of requestor
  - 5001
- Access permitted
  - r, rw, …

Security Perimeter

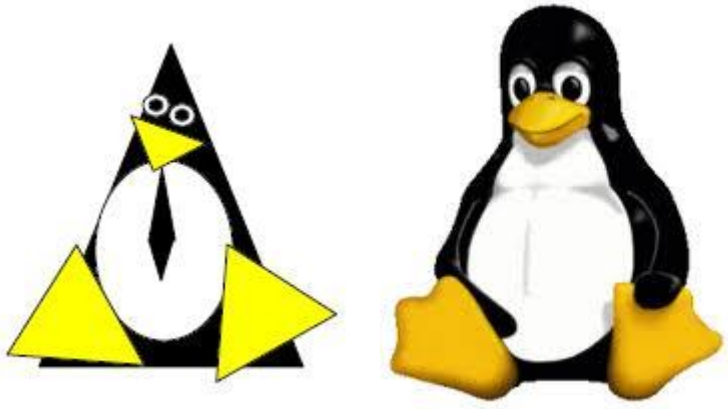


Native Application Woes

- Use kernel interfaces directly
- Avoid service based controls

System Object Attributes

- Smack label
  - UID
  - GID
  - Mode bits
- Smack access rules



Running Applications

- Unique Smack label per application
- Unique UID per user account
- Application launcher