The reference model for smart TV

China Electronics Standardization Institute

CHINA ELECTRONICS STANDARDIZATION INSTITUTE

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- The basic requirements
- System Management

- **The development of Smart TV**

The development of TV

- Analog TV signals
- One-way broadcast
- Fewer TV channels

- Digital televis signals
- One-way broa
- Relatively ric content

- IP Networks Data
- Fully interactive applications
- Very rich in content

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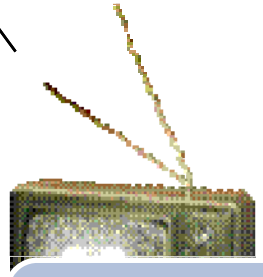


CRT TV

Digital TV

Internet TV

Smart TV

The development of Smart TV market

- **China's major TV manufacturers have introduced smart TV. Smart TV market is growing rapidly**

CHANGHONG

TCL

Hisense

KONKA

Skyworth

Haier

The development of Smart TV market

Summary

- Smart TV conforms to the development trend of TV— “high definition, networked and intelligent ”
- It will provide:
  - ✓ Web search
  - ✓ IP TV
  - ✓ Video on Demand (VOD)
  - ✓ digital music
  - ✓ online news
  - ✓ online video phones
- It realizes the cross-platform search between television, Internet and procedures.

- **Standardization suggestions**

Standardization suggestions

- Title: The reference model of Smart TV
- Content:
  - The concept of Smart TV
  - The basic requirements
  - The typical applications
    - Access to internet or home network
    - APP store
    - Multi screen interactive
    - Multi input mode
  - System Management
    - Application Management
    - Input-output model of the Interactive platform
    - The Interactive platform API
    - security management

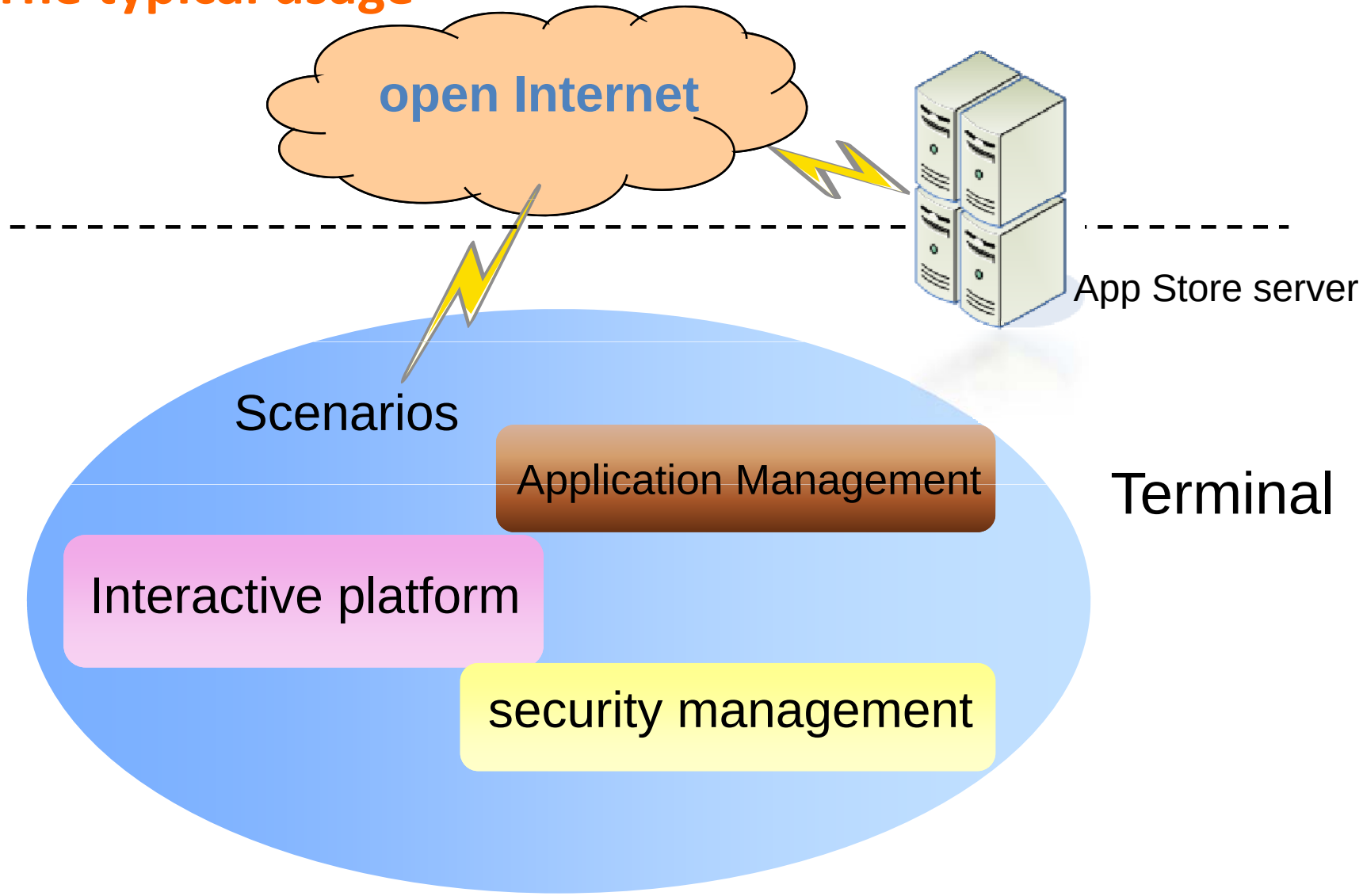
- **The concept of Smart TV**

The concept of Smart TV

- **The concept of Smart TV**
  - ➢**It is based on the adequate performance of the hardware, in addition to the traditional TV features;**
  - ➢**It uses embedded operating system platform and applications support environment;**
  - ➢**It has wire or wireless network interface, which can support to access personal network or public network;**
  - ➢**It supports end users independently install and uninstall various applications to meet the needs of diversified and personalized TV products.**

The Conception of smart TV

- **The typical usage**



The Conception of smart TV

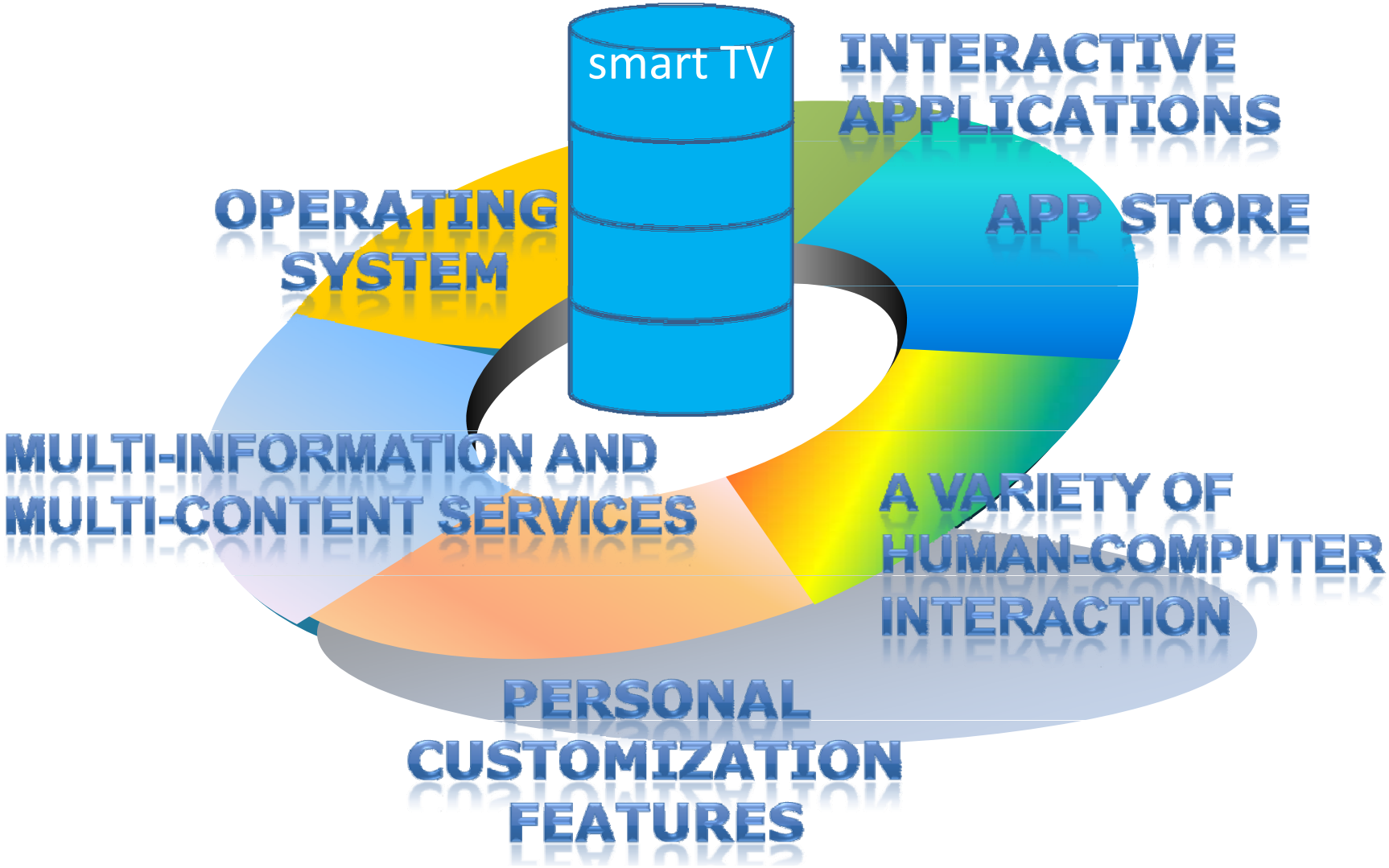
- **The difference between Smart TV and IPTV**

	Smart TV	IPTV
Business Model	End user combines different applications	Operator provide fixed services
operating system	Open embedded operating system	Open embedded operating system is optional
APP stores	Large number of APP stores	Small number of APP stores
Content	Provide by personal or internet	Provide by operator
User interface and functions	End user can change	End user can not change

- **The basic requirements**

The basic requirements

- **The feature of Smart TV**



The basic requirements

- Support user interface for Language input
- Support open embedded operating system
- Support high-performance multimedia process
- Support wire or wireless connection
- Support Multi screen interactive
- Support App install and uninstall
- Support access to personal network or public network

- **The typical applications**

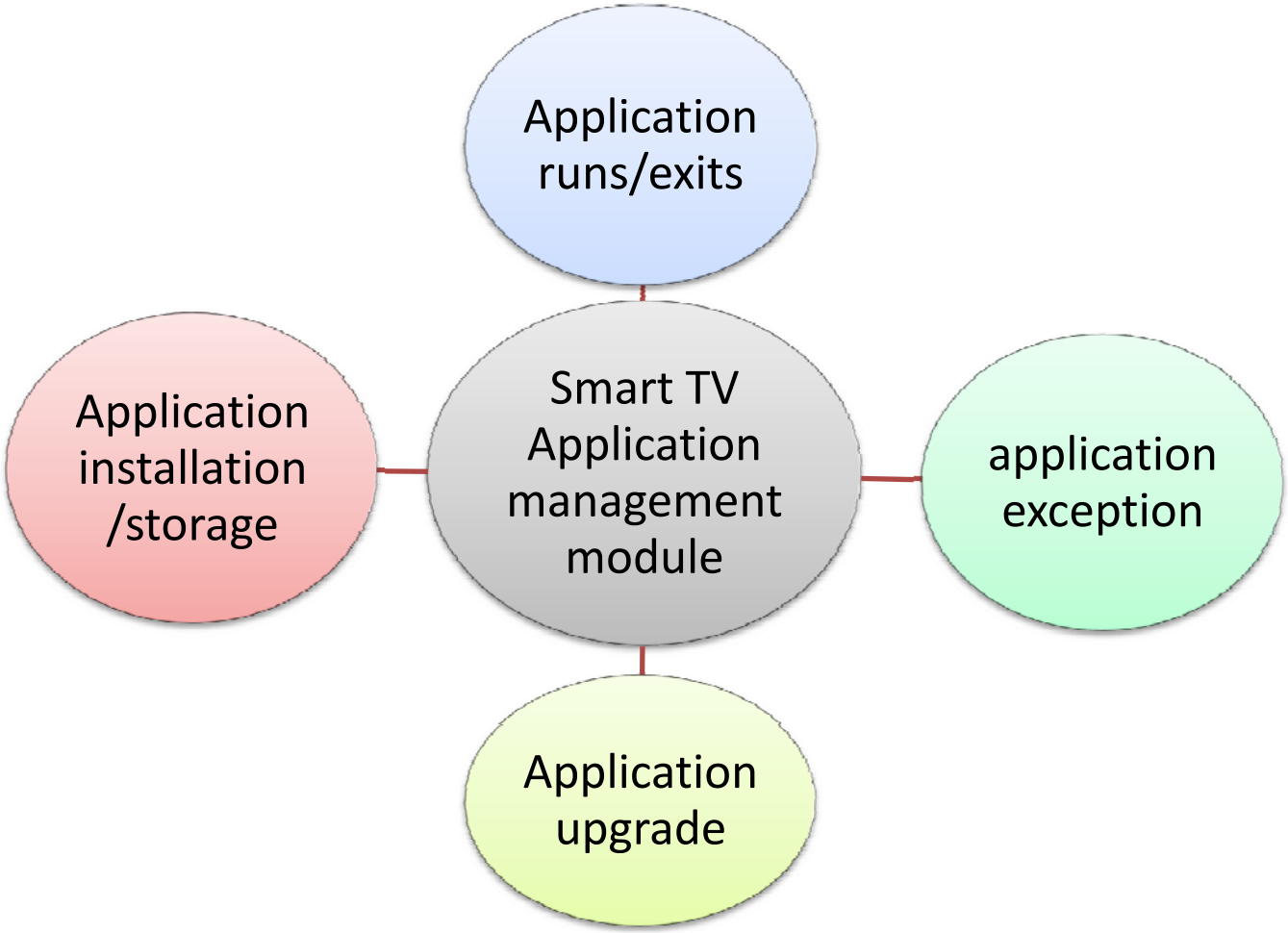
The typical applications

Smart TV

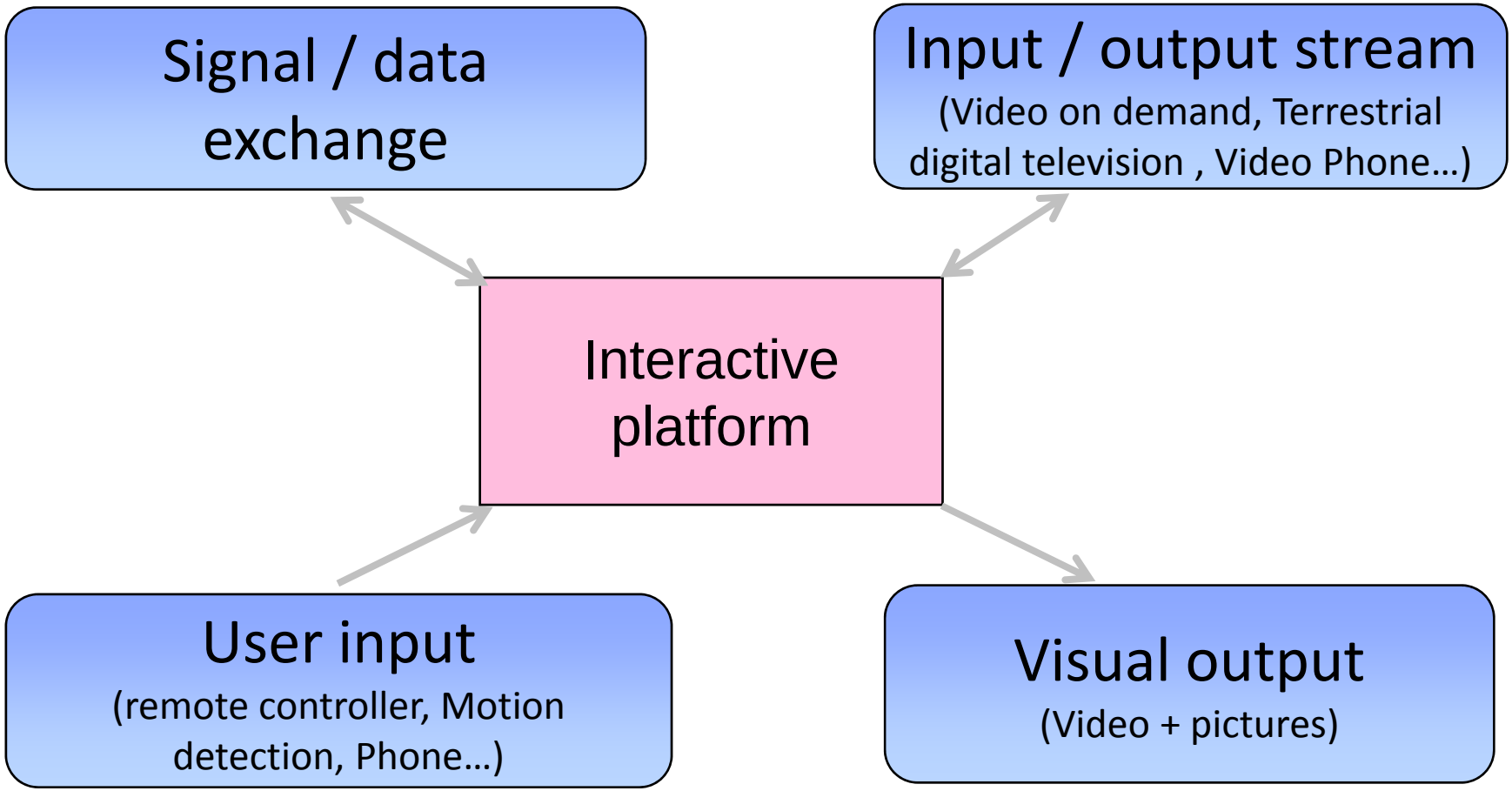
- Install uninstall the application
- Access to the App Store
- Multi-screen interactive
- Multi-input mode
- Support the interactive applications

- **System Management**

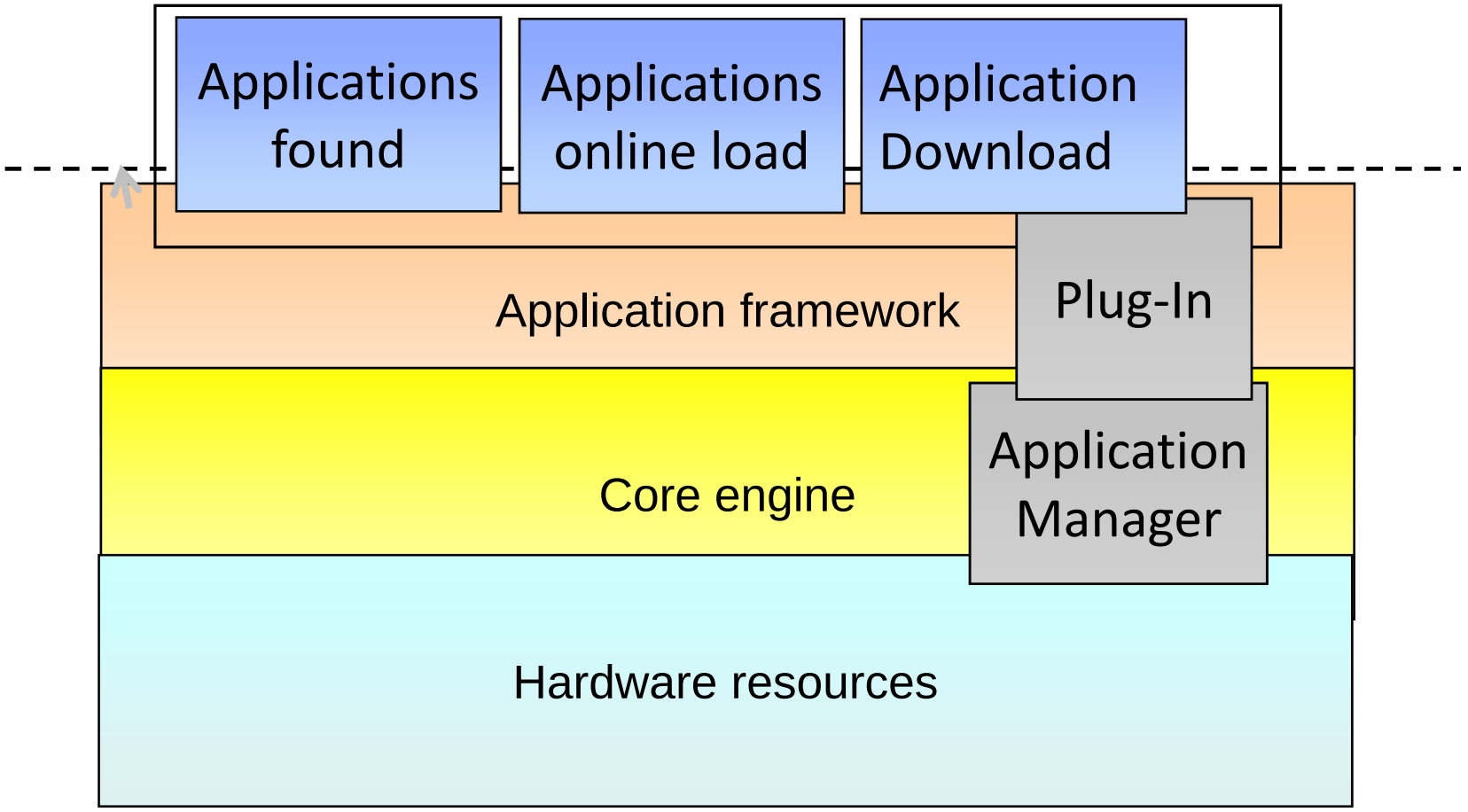
Application Management



Input-output model of the Interactive platform

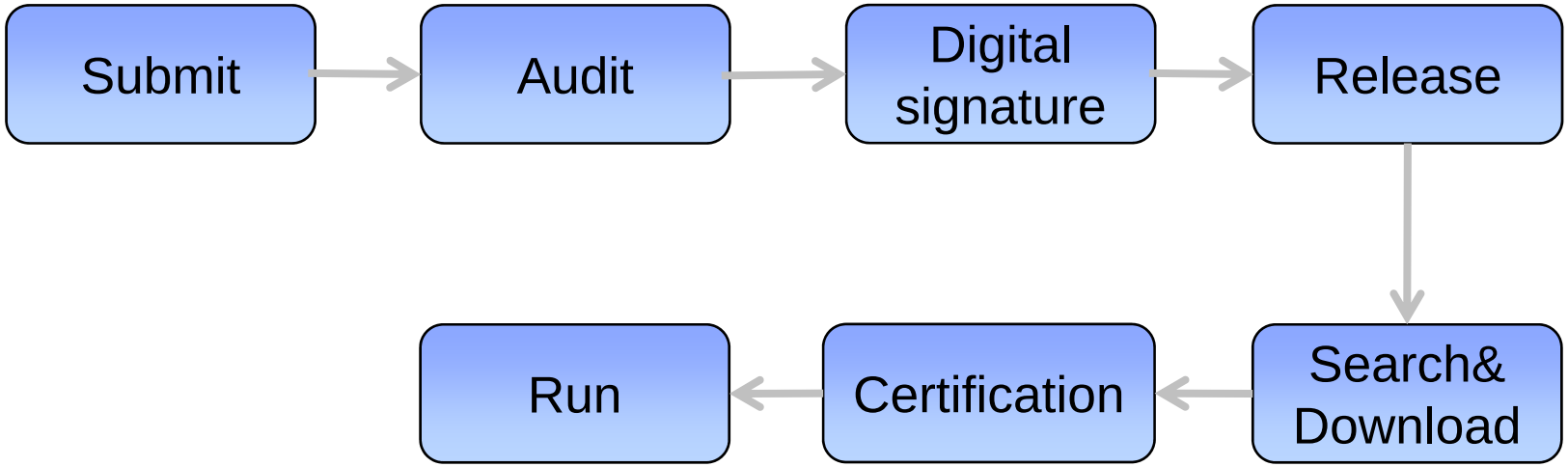


The Interactive platform API



security management

- Recommend the use of digital signature technology to ensure application integrity



Harmony with existing standards

- **The proposed smart TV draft standard will be harmony with the IPTV standards issued by ITU or other international standardization organization.**
- **It will consider the existing DTV standards.**
- **It will also focus on the standardization scope of TC 100.**

Thank You!

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