

# Conceptual Model for Internet Television

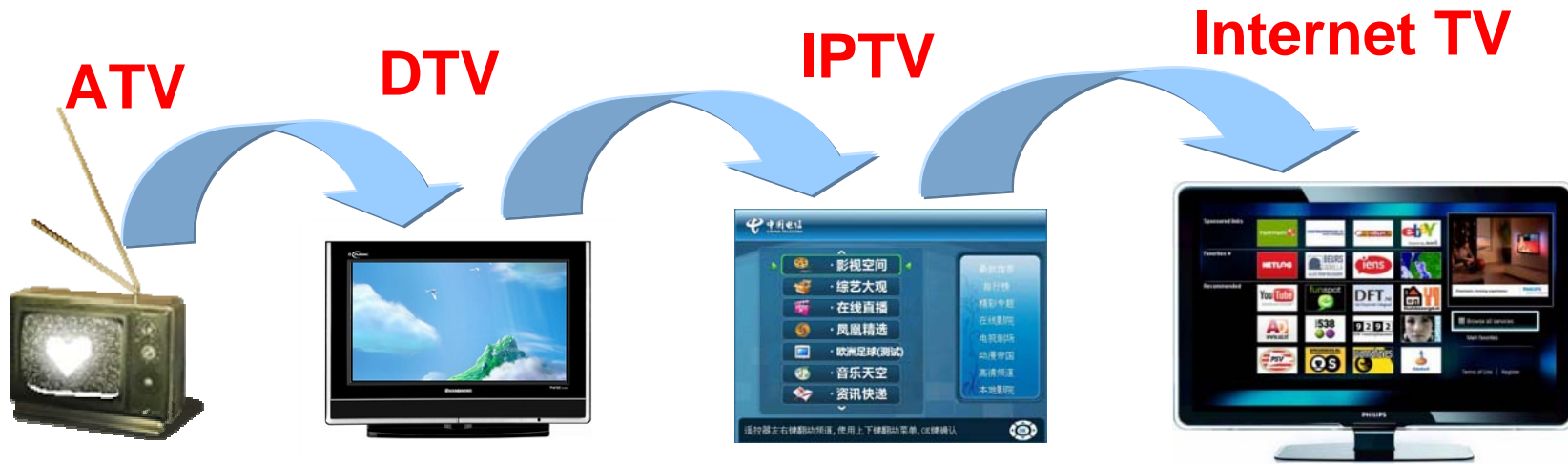
# Contents

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- ◆ Why customers need internet television
- ◆ Internet television market & standardization
- ◆ Conceptual model for internet television

# Evolution of television

Proliferating content access



CRT



Flat Panel

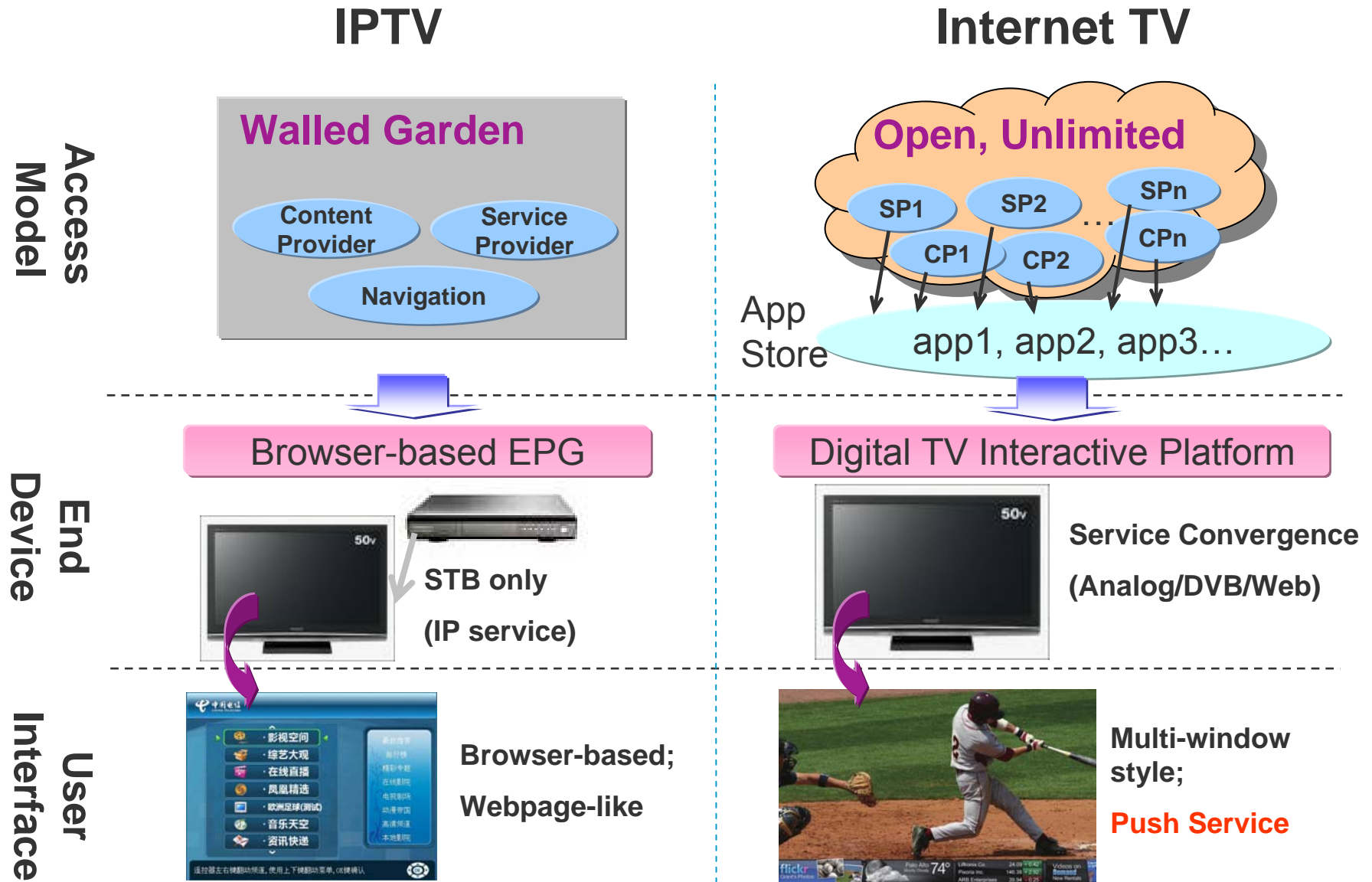


3D



Improving watching experience

# IPTV vs Internet TV



# IPTV vs Internet TV - Details

	<b>IPTV</b>	<b>Internet TV</b>
<b>Access model</b>	<ul style="list-style-type: none"> <li>◆ Manageable, operable network</li> <li>◆ EPG guide</li> <li>◆ Walled garden</li> </ul>	<ul style="list-style-type: none"> <li>◆ Completely <b>open</b> internet</li> <li>◆ Search content/service through Application Store</li> </ul>
<b>Business model</b>	<ul style="list-style-type: none"> <li>◆ Operator dominant, charge for content/service</li> </ul>	<ul style="list-style-type: none"> <li>◆ <b>Free</b> for most content /service, diverse business model as PC</li> <li>◆ Application store oriented</li> </ul>
<b>Service scenario</b>	<ul style="list-style-type: none"> <li>◆ Mostly for Set-top-box, ip-based service only</li> <li>◆ Browser-based EPG</li> </ul>	<ul style="list-style-type: none"> <li>◆ TV-centric service convergence(Analog/DVB/Web)</li> <li>◆ Open terminal middleware platform</li> </ul>
<b>User interface</b>	<ul style="list-style-type: none"> <li>◆ Webpage-like, mouse operation heritage</li> <li>◆ Bad user experience with EPG occupying whole screen</li> </ul>	<ul style="list-style-type: none"> <li>◆ Widget-like application, multi-window style</li> <li>◆ <b>Push Service</b></li> </ul>

# Application store – New era for TV

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- ◆ Has been proved very successful in mobilephone industry



- ◆ Will bring great convenience to TV consumers:
  - People from all walks of life develop applications to meet consumers' diverse requirement
  - Through which thousands of small operators provide services - competition makes progress
- ◆ The more open the interactive platform (i.e. terminal middleware), the better it does
  - Require standardization on an international basis

# Summary

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- ◆ Internet TV is considered the 4th generation of television history
- ◆ Internet TV brings consumers completely open access to internet, as well as great convenience, compared with IPTV
- ◆ Application store is expected to be the most suitable business model for internet TV industry
- ◆ International standard needs to be set up to maximize the implementation of application store

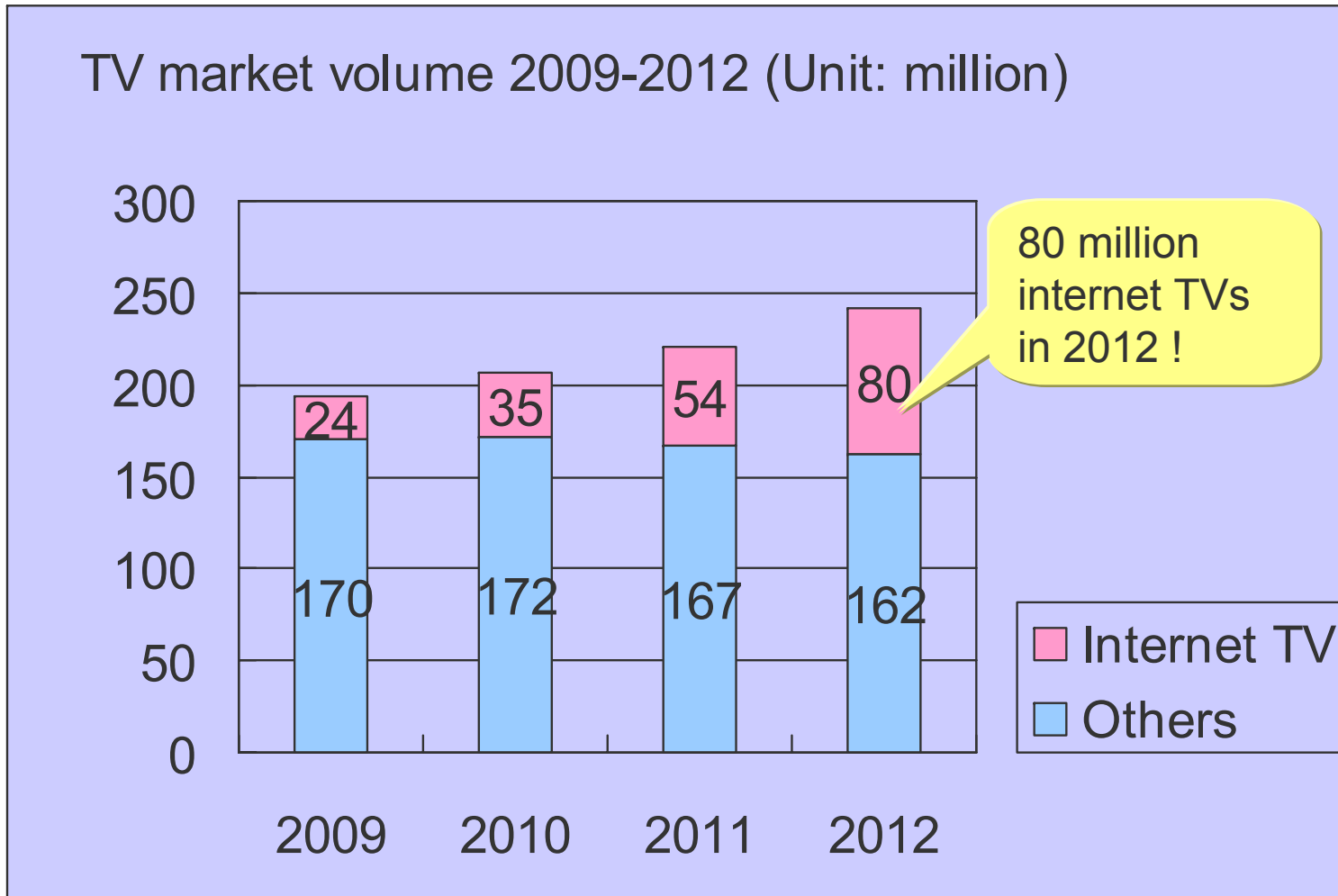
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# Internet TV market forecast



Source: NXP

# Internet TV in the world

- ◆ Internet TV has been exploding since 2008



Philips Smart TV



Apple TV



Google TV



Samsung Connected TV



LG Internet TV



acTVila 「アクトピラ」の詳細については  
こちらから  
香港網-PCPOP.COM

Japan acTVila

# Internet TV in China

- ◆ China has become a major market for internet TV
  - Almost 1 million in 2009
  - Expect 6 million in 2010



Changhong



TCL



Hisense



Konka



Skyworth



Haier

# Standardization

- ◆ International standardization for Internet TV has not been set up
- ◆ Other related standardization:
  - Open IPTV Forum
  - Internet TV enterprise standard: Yahoo! Widgets...
- ◆ China industry standard for Internet TV
  - Already set up in July 2010

建议项目名称 (中文)	数字电视交互式平台 第一部分：系统架构			建议项目名称 (英文)	Digital Television Interactive Platform Part 1: System Architecture
制定或修订	<input checked="" type="checkbox"/> 制定		<input type="checkbox"/> 修订	被修订标准号	
采用程度	<input type="checkbox"/> IDT	<input type="checkbox"/> MOD	<input type="checkbox"/> NEQ	采标号	
国际标准名称 (中文)				国际标准名称 (英文)	
采用快速程序	<input type="checkbox"/> FTP			快速程序代码	<input type="checkbox"/> B <input type="checkbox"/> C
ICS 分类号	33.160.99			中国标准分类号	M74

**Digital  
Television  
Interactive  
Platform**

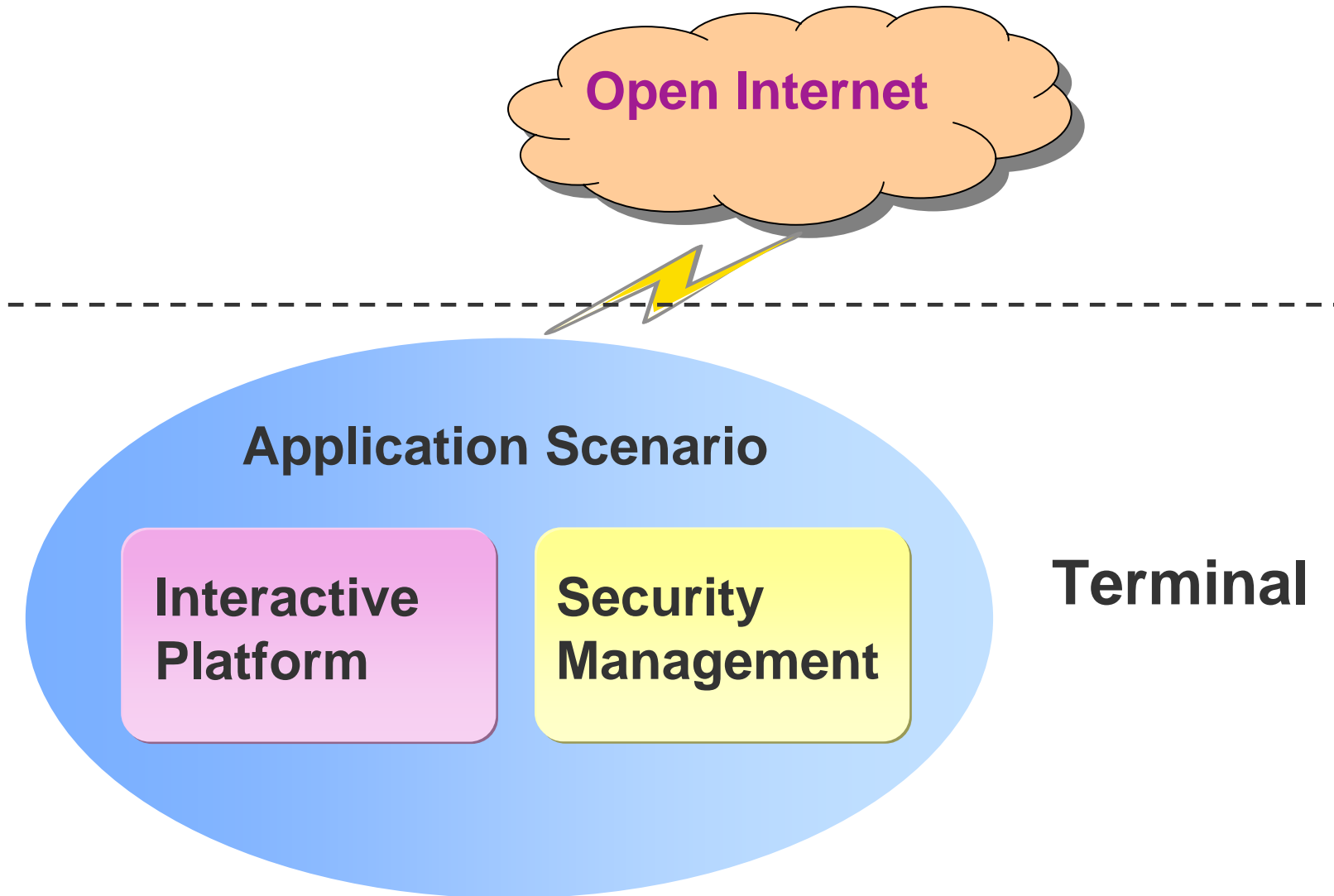
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# Conceptual model overview

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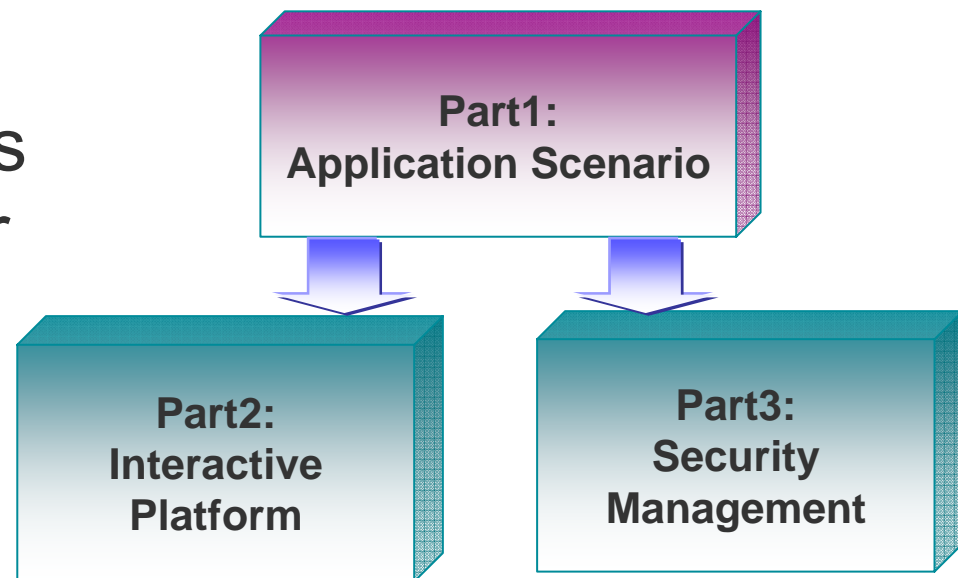


# Description

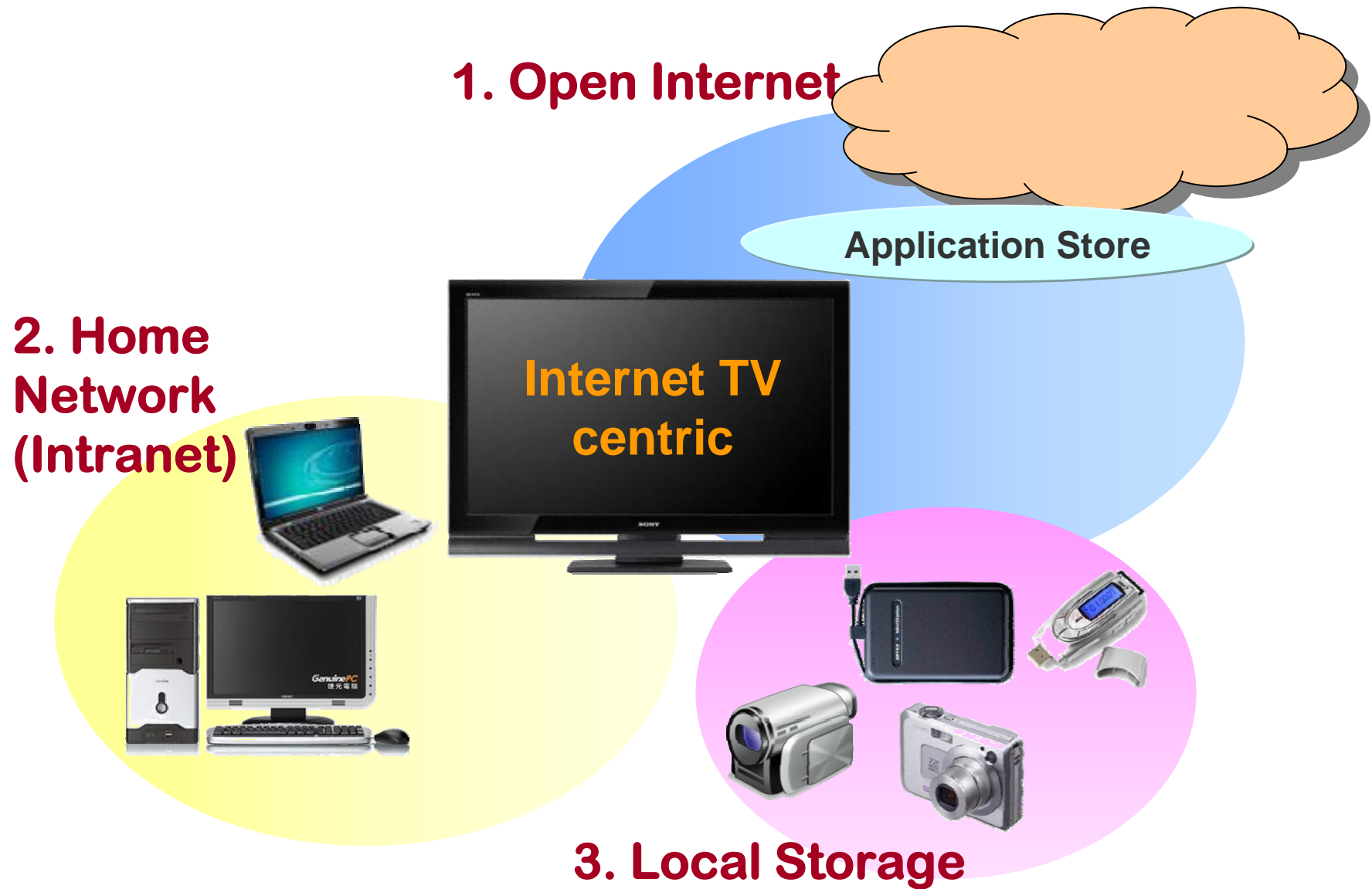
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- ◆ Internet TV standard consists of three main parts (Terminal only, no need to cover open internet):
  - Part1: Application Scenario
  - Part2: Interactive Platform
  - Part3: Security management

- ◆ The Part 1 raises requirements and calls on Part2 and Part3 for implementation



# Part1: Application Scenario

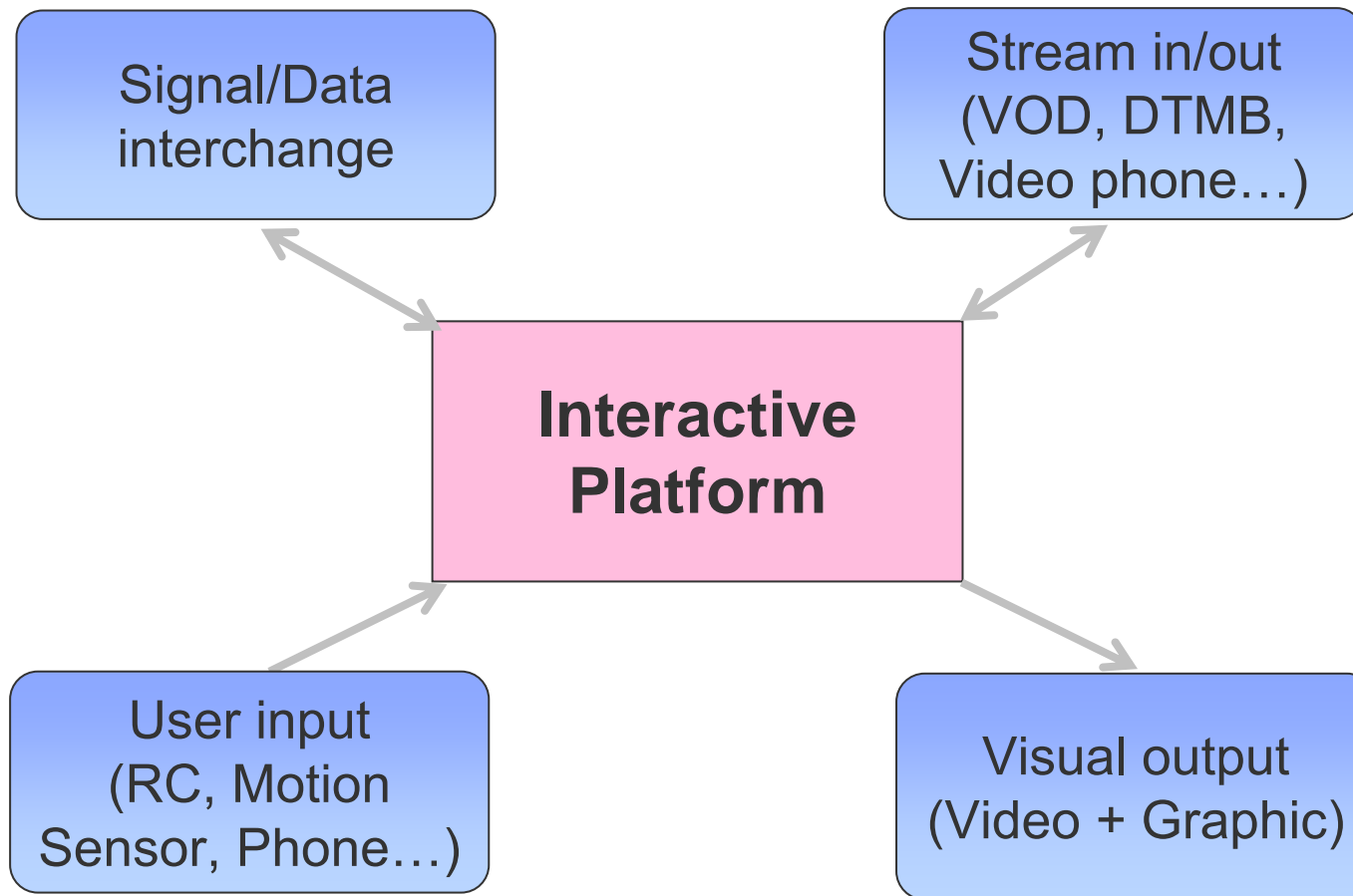




# Part2: Interactive platform

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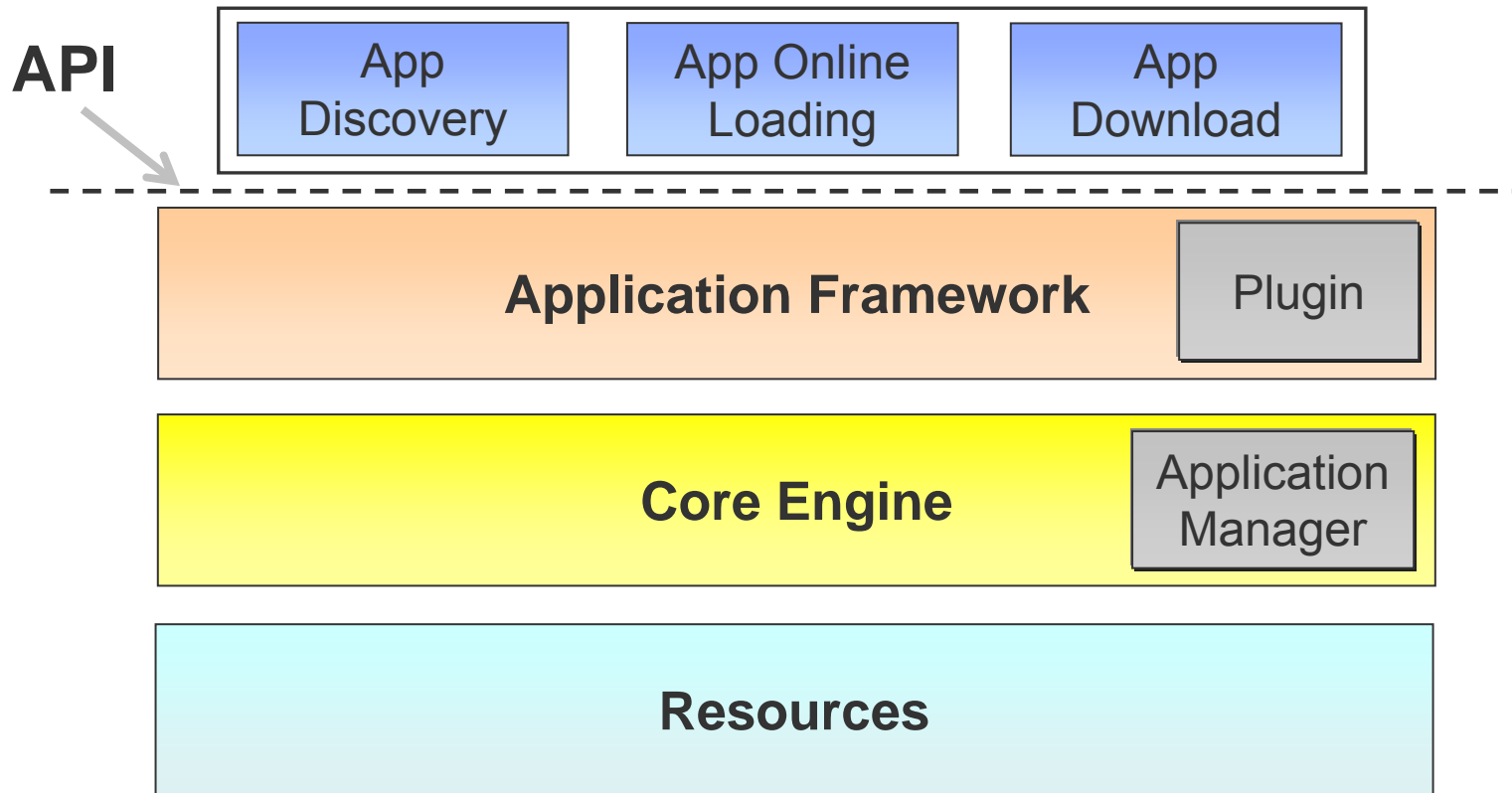
## Input/Output Model



# Part2: Interactive platform

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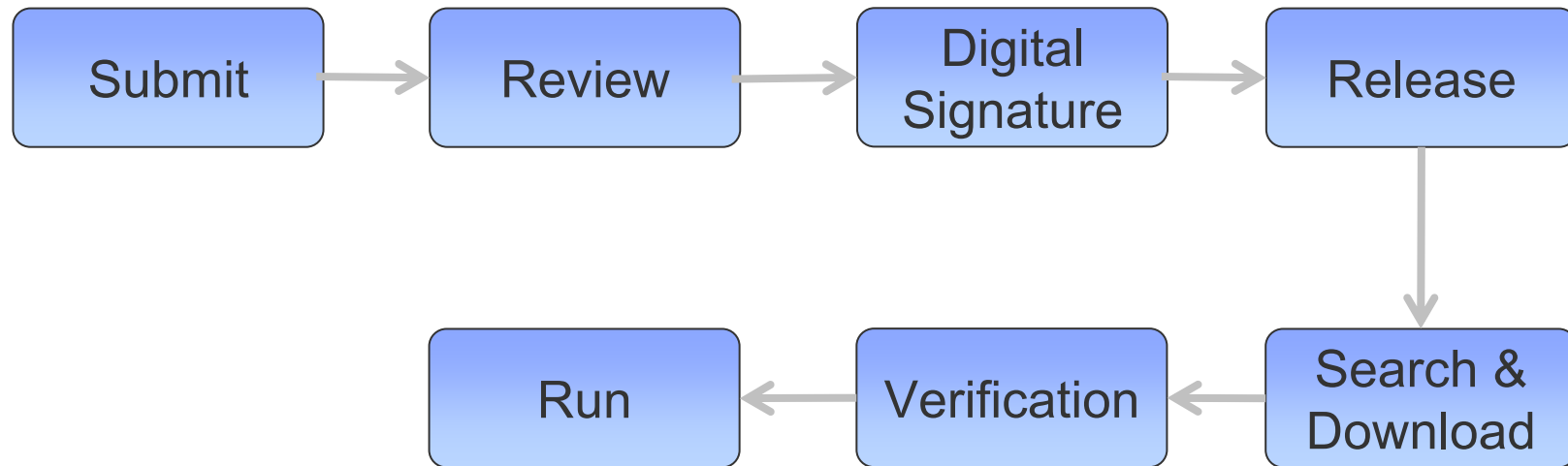
## Basic Architecture



# Part3: Security Management

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- ◆ Suggest using digital signature technology to ensure application integrity
- ◆ Application flow chart:



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**THANK YOU**