

# Setup Surveillance and Triple Play Network

Metanoia  
C.T. WU



RISC

DSP

Analog

Memory

Interface

**METANOIA**

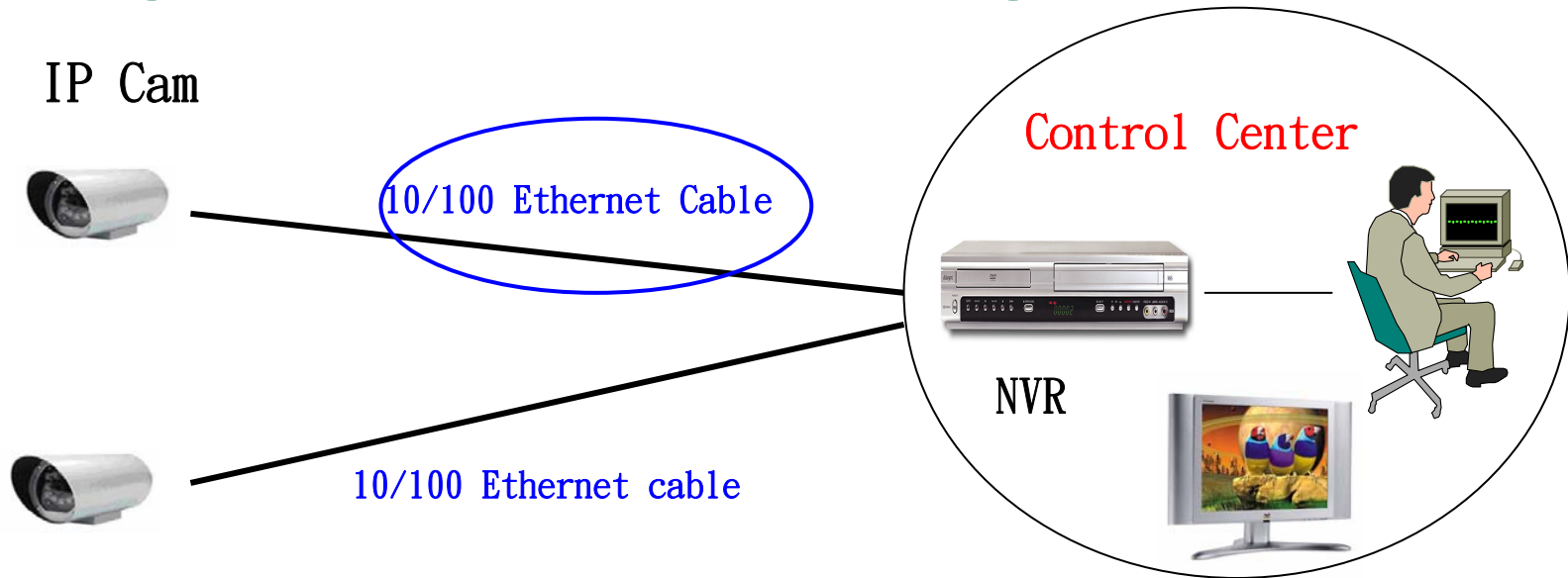
# ***IP-based Communication Applications***

- IP-based Digital Surveillance Application
- IP-based Digital Signage
- IPTV & MoD/VoD in Full HD
- IP-based for Intelligent Transportation Applications

## ***Benefit of our solution***

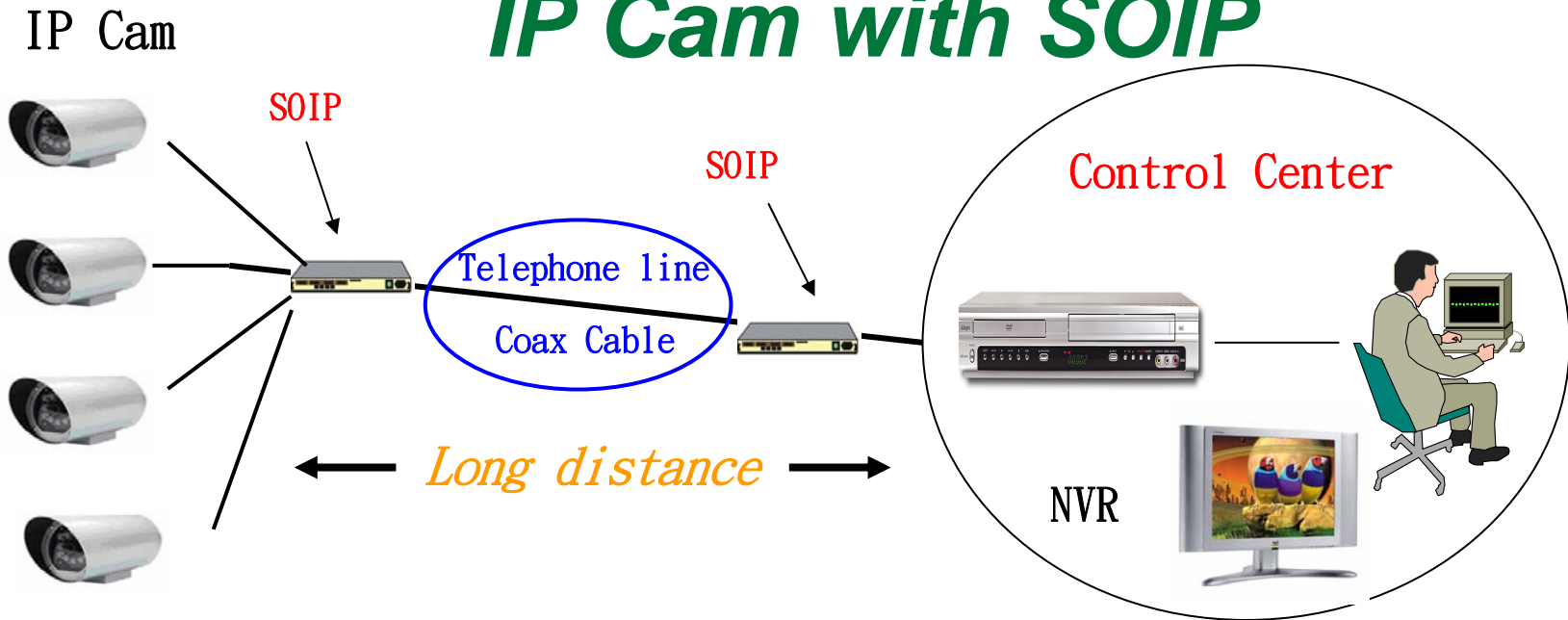
- ◆ Provides a painless upgrade path from traditional analog systems to all digital systems
- ◆ Longer reach compared to Ethernet cables and analog signal over coaxial cable
- ◆ Lowest deployment cost, there are telephone line and coaxial cable anywhere
- ◆ Maximum support downstream 100Mbps and upstream 100Mbps, long reach till 2KM
- ◆ Integrating RS232/RS485/DIDO to apply Industrial Control, Homeland Security and Intelligent Transportation Control for total solution
- ◆ Full IP based communication environment
- ◆ Provides a future upgrade path as technologies evolve Unsurpassed flexibility
- ◆ Based on industry proven VDSL technologies
- ◆ Optimal cost/performance ratio

# ***IP Cam with Ethernet Cable Limitation***



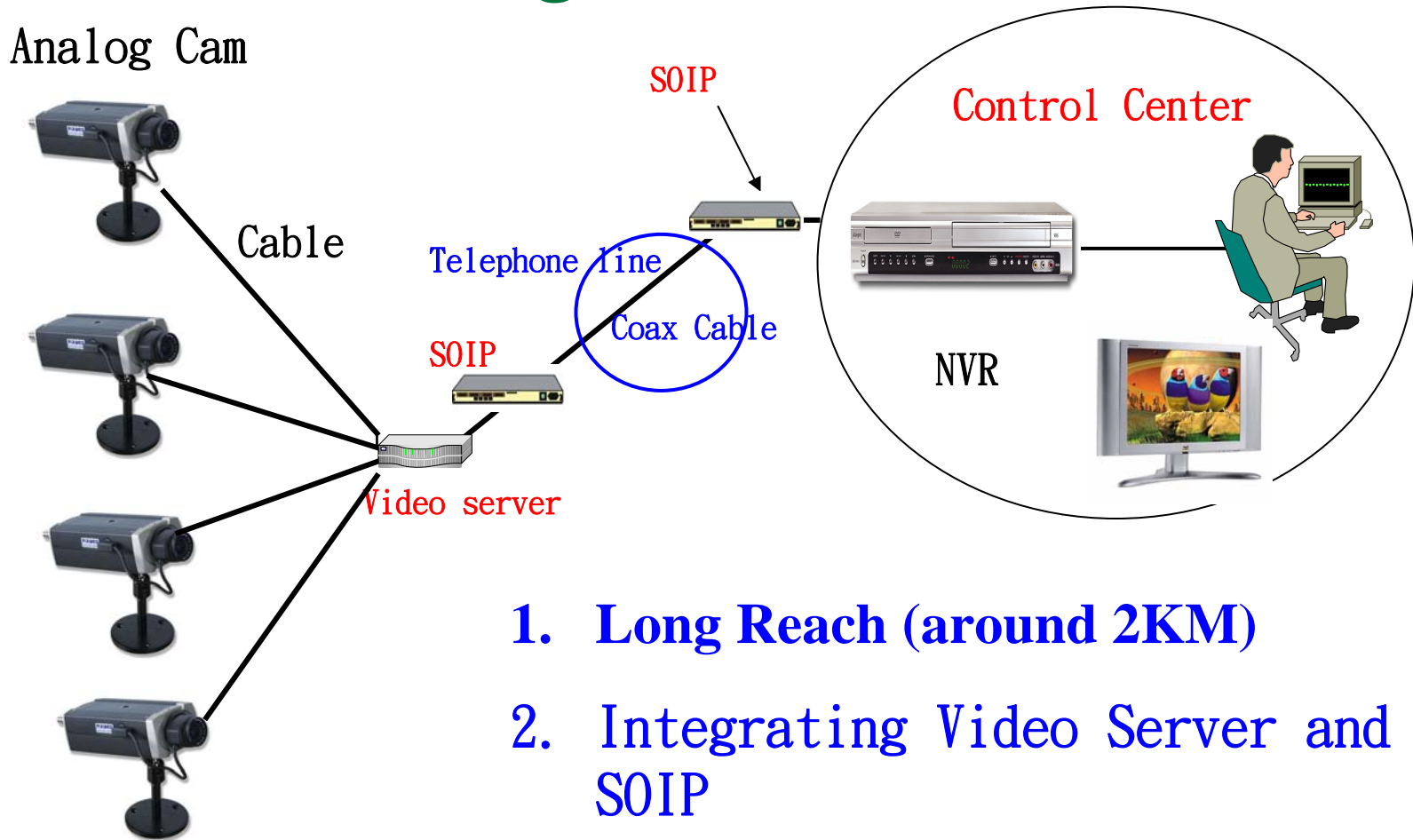
- 1. 10/100 Ethernet can not reach long distance, around 100M, need Hub or Switch to expand distance**
- 2. 10/100 Ethernet is difficult to use outdoor**

## IP Cam with SOIP



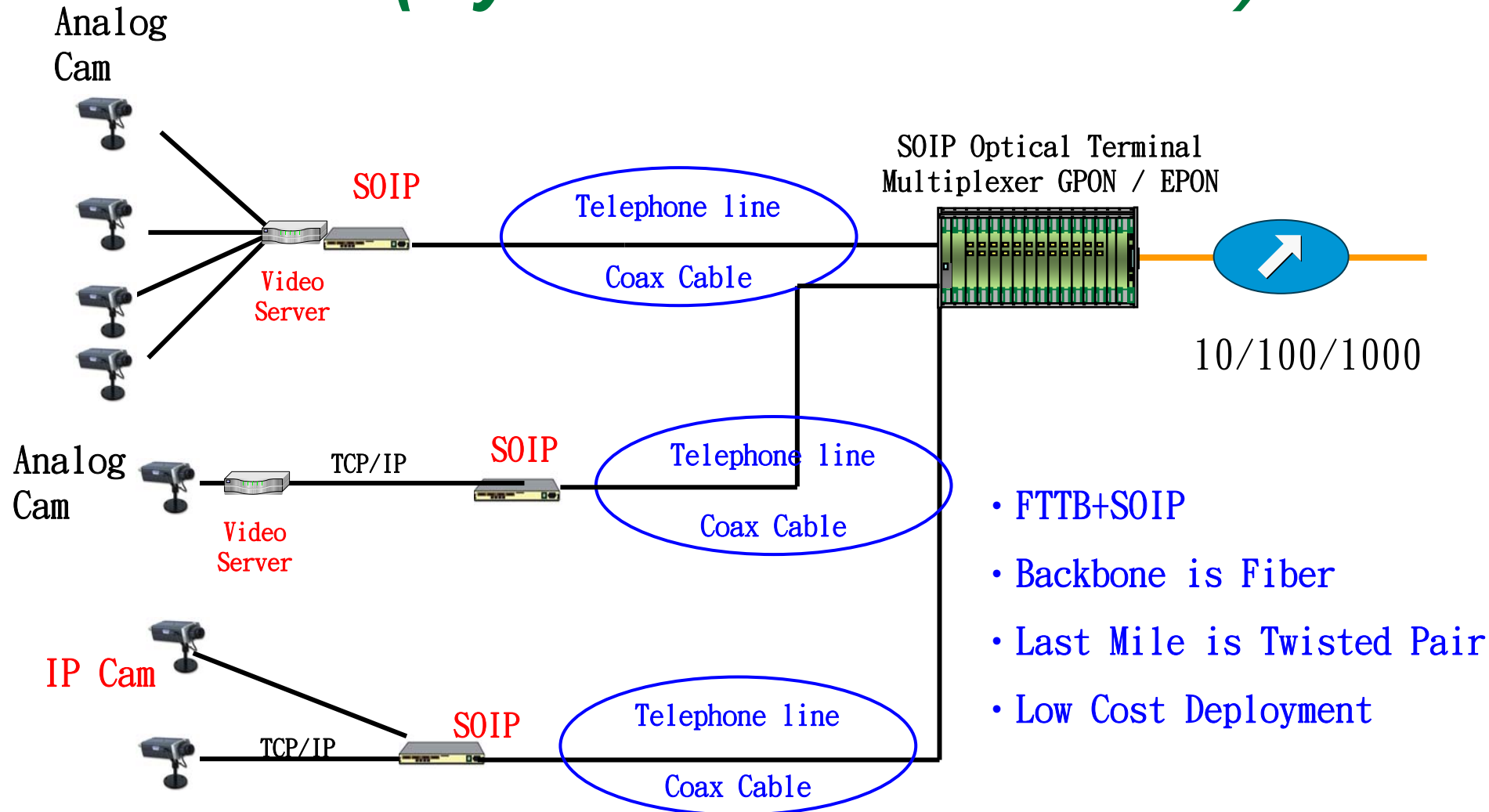
1. Long Reach (around 2KM)
2. Wide Bandwidth, 100Mbps @ 300M, multiple IP Camera input, 5 Mbps @ 1.5KM
3. Telephone line / Coax Cable are suitable outdoor
4. Plug & Play, fast deployment

## Analog Cam with SOIP



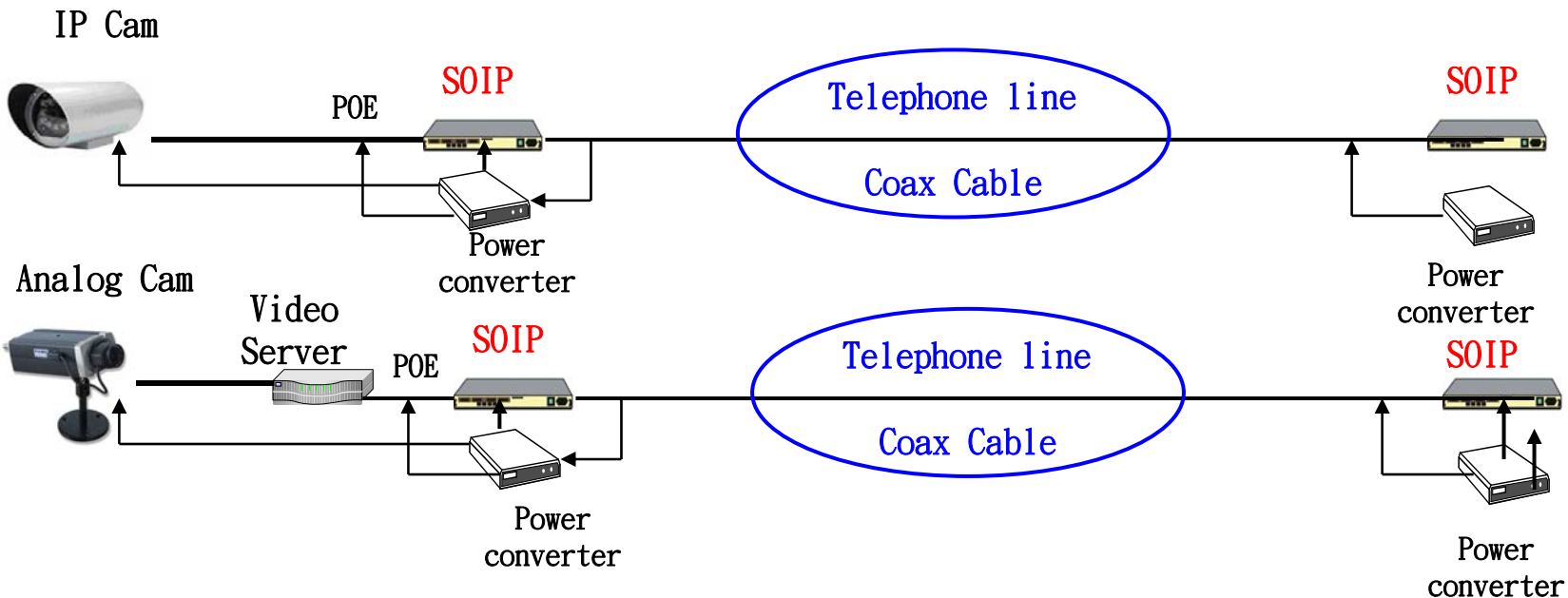
1. Long Reach (around 2KM)
2. Integrating Video Server and SOIP
3. No extra wire work

## HFT(Hybrid Fiber Twist Pair)



- FTTB+SOIP
- Backbone is Fiber
- Last Mile is Twisted Pair
- Low Cost Deployment

## Power Over Security



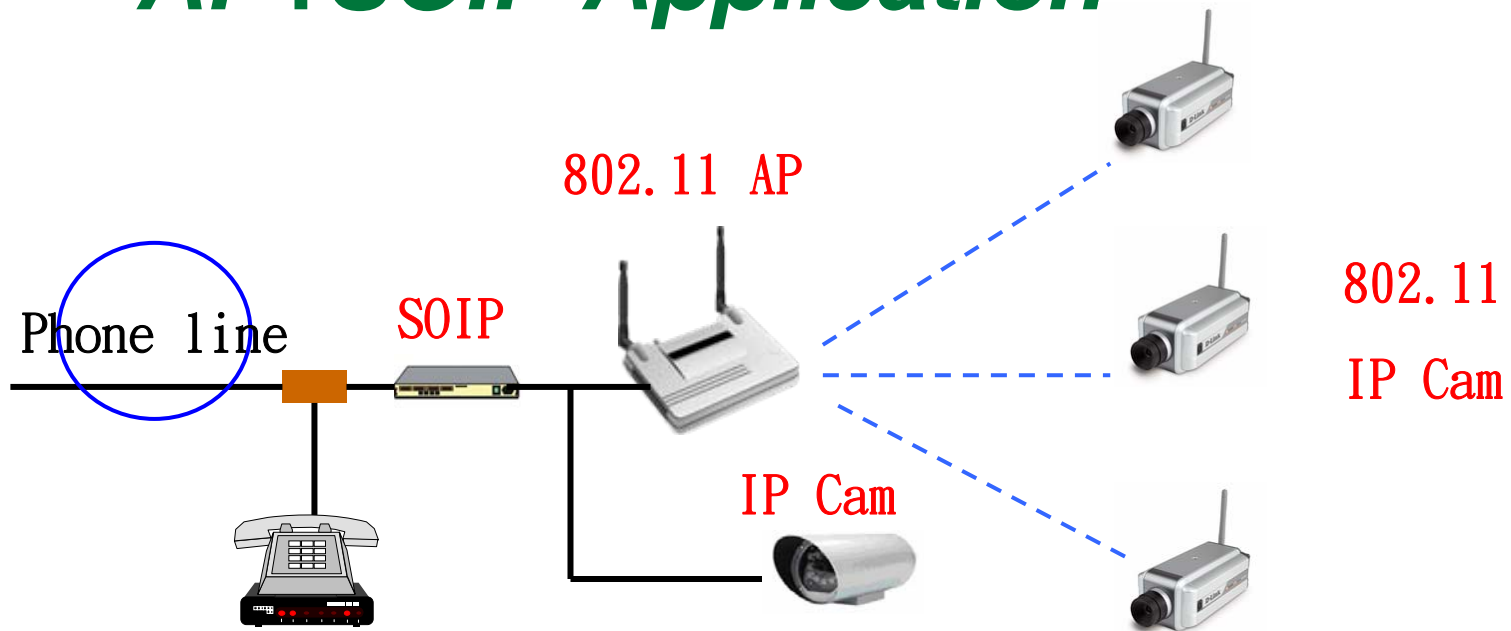
POE: Power Over Ethernet

Support Power feeding function.

Good Application in without power supply area

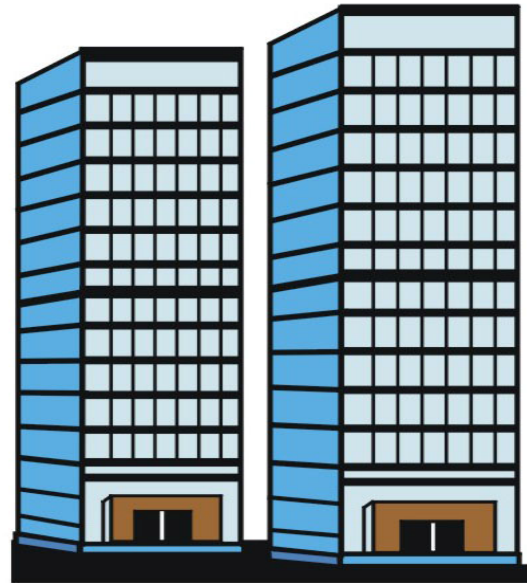
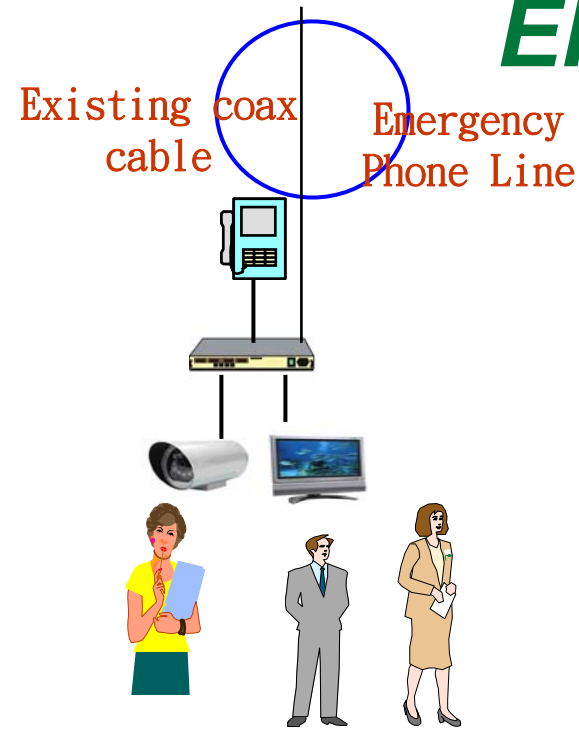


## AP+SOIP Application



- Difficult to use wire deployment
- Parking place in back floor or tower
- Old Community or Hotel building
- By existing phone line or coax cable with wireless AP

## Elevator Application

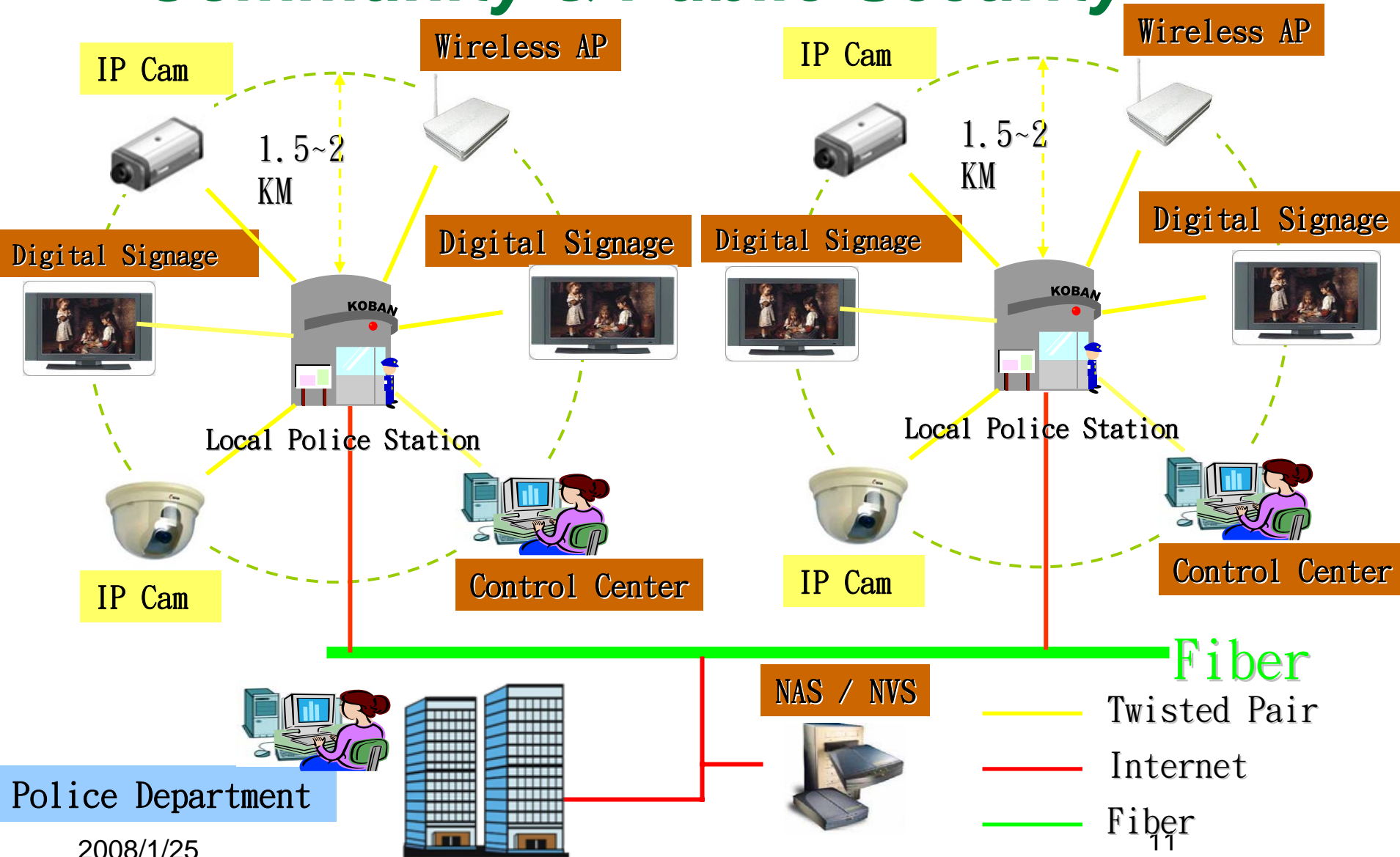


- By emergency phone line or existing coax cable
- IP camera & Digital Signage
- Plug & Play without wiring

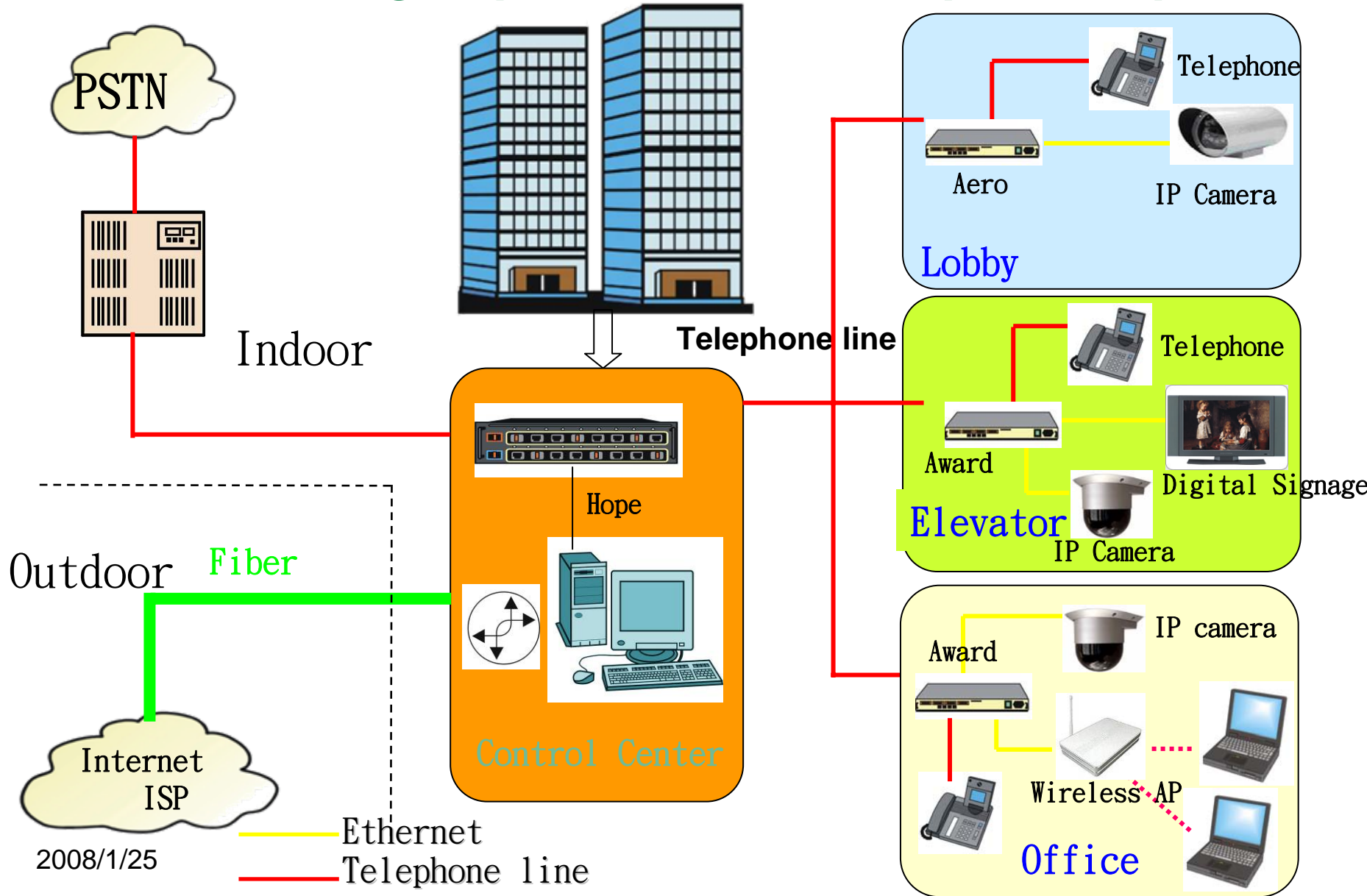
### Elevator Environment

- Noise interference by motor
- Difficult to wire
- Special algorithm for noise immunity

## Community & Public Security



## Business Building/Department Store/Airport/Hospital

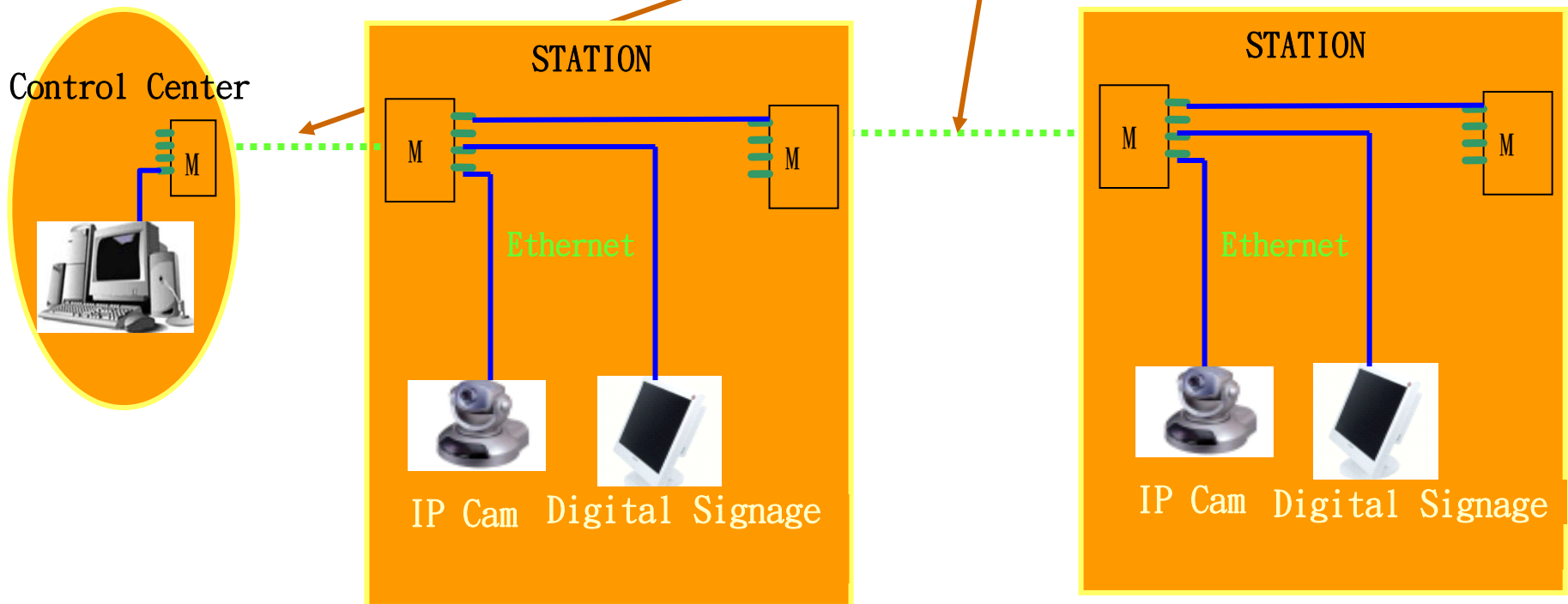


## Train & Subway Station

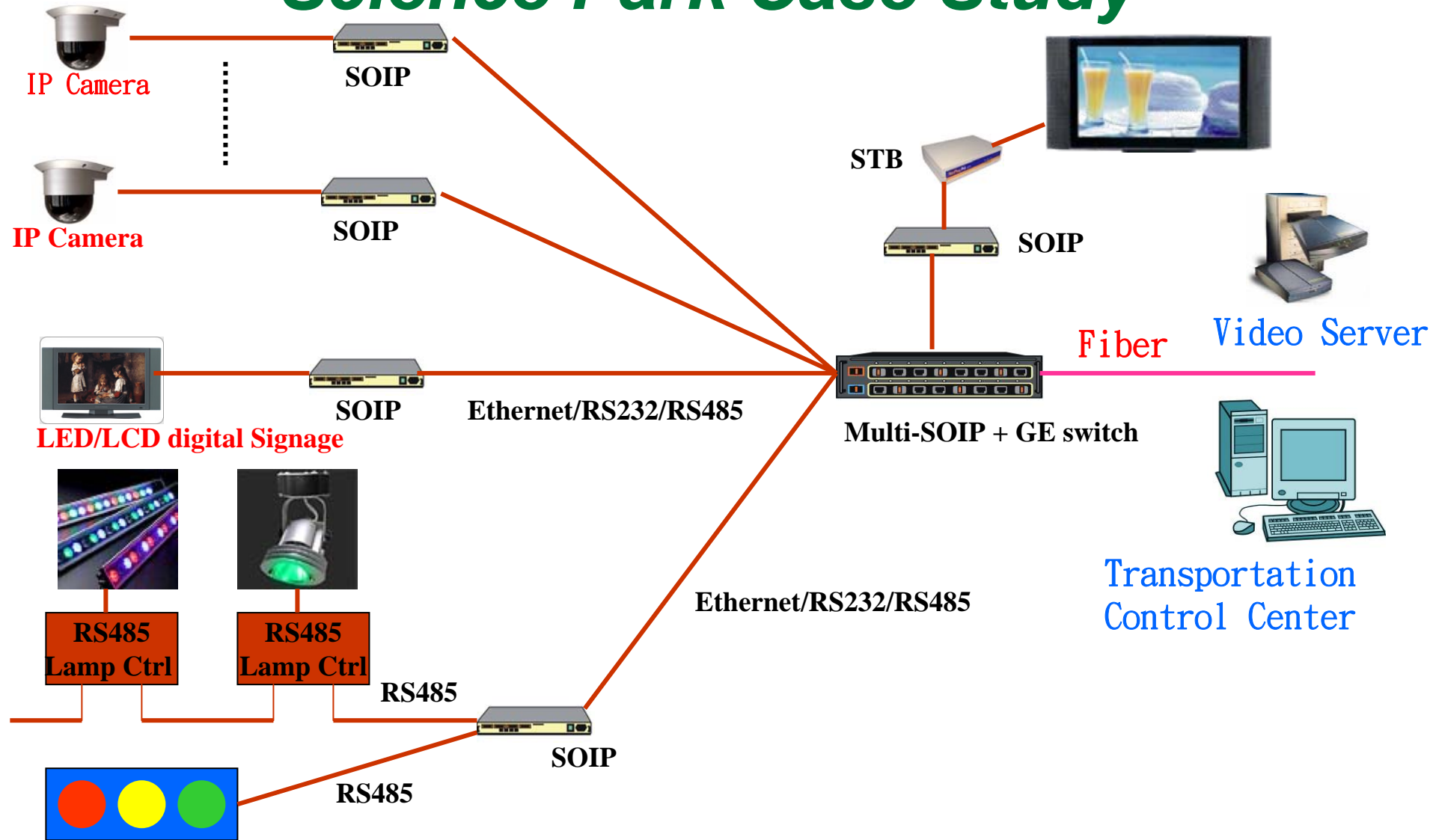
VDSL Extender  
Ethernet



Each VDSL extender can support 2 KM & 3 Mbps/3 Mbps data rate



## Science Park Case Study

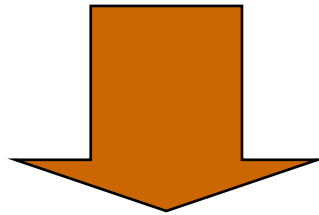


## ***IP-based Communication Applications***

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## ***IP Digital Signage Trend***

- From static advertisement to interactive digital signage
- Target different customers on different promotion advertisement
- Based on special customers and locations to broadcast focus video advertising program (department store, airport, hospital, bank, shopping mal and elevator...etc)
- Outdoor/indoor interactive broadcasting by internet



**Focus Media**



## Compare with Digital Signage

Old



- By CF/USB Flash or Disk play program
- Refresh advertising program per week
- Big man cost waste

New



Setup Box

- By internet
- Real-time, interactive
- No man cost for program refresh
- Good promotion result

Control center

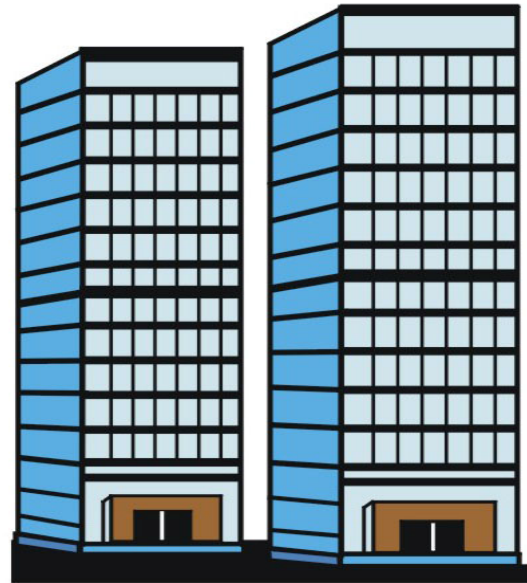
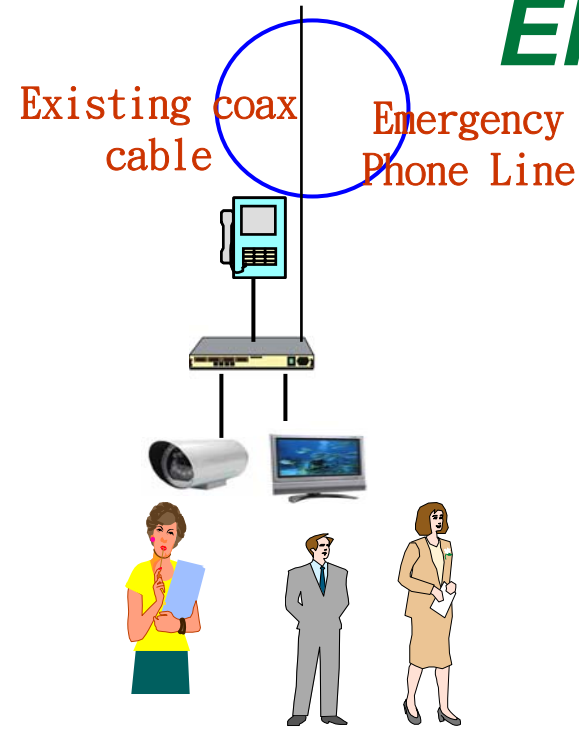
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## ***What functions need for Digital Signage***

- Integrate LCD TV 和 IP set top box
- Support multi-window, play IPTV, WebTV, Advertising program, horse-running lamp, real-time important news
- To interrupt on playing program anytime, show up important news and message
- Support MPEG2/MPEG4/H.264/WMV9/AVS compression technology, provide Full HD quality by Ethernet, coax cable or phone-line
- Support PPPoE and DNS, complete software platform

## Elevator Application



- By emergency phone line or existing coax cable
- IP camera & Digital Signage
- Plug & Play without wiring

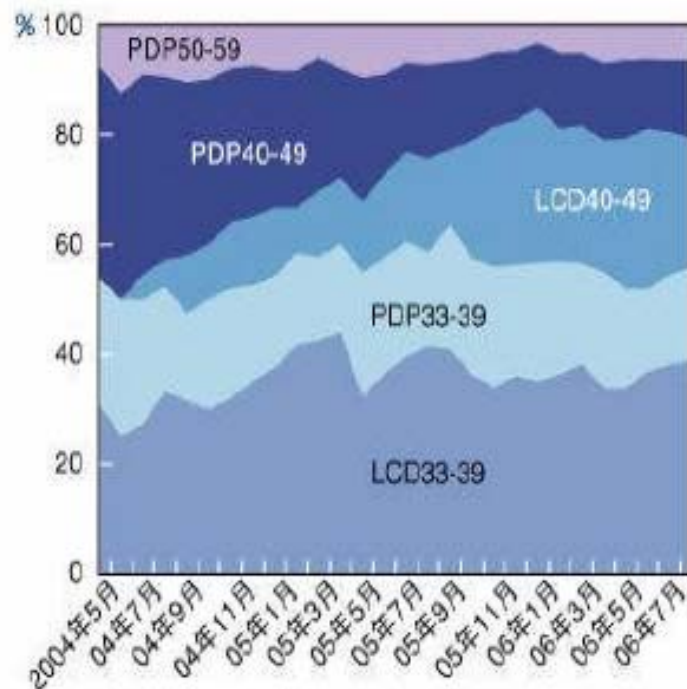
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## ***IP-based Communication Applications***

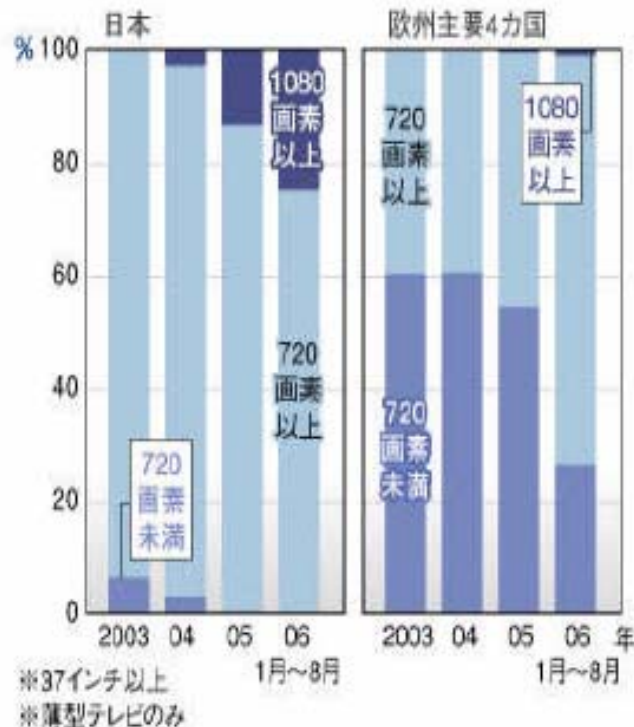
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## Full High-Definition Video Market Potential in Japan



※日本市場  
※33インチ以上のLCDとPDPのみ

LCD and PDP share in Japan
LCD...Sharp, Sony, ETC
PDP...Matsushita, Hitachi
More than 33 inch



Left: Japan	Right: Europe
1080p => 25%	
720p => 75%	
y2006 JAN-AUG	
*based on 37 inch or more	

**SINBON**  
**IP-STB+VDSL2**  
**1080 HD-Video**  
**Product Line**

## ***LRE/VDSL2 and 1080P HDTV based Video over IP***

- (1) 1920x1080P HDTV Interact Video on Demand
- (2) 3.5k feet phone-line covered “Clear” 30Mbps
- (3) Stable QoS for Full HD IP-Video and 1 ms delay
- (4) Open Architec, Best Price/Performance and 15 min/CPE to install

## Full HD Media Player (IP Set Top Box) Content Sources

- Blue-Ray DVD and HD DVD Video source
- Internet Download: TiVo, You Tube, Website...etc
- Sony PS3 internet v.s. Microsoft Xbox 360 live
- Digital Content from US Hollywood

次世代電玩主機內容服務(Next Generation Gaming/IP-SetTop Box Services ),2006,Nov.08			
Vender/MediaPlayer (IP SetTop Box)	任天堂 Wii	SONY PlayStation3	Microsoft Xbox 360
Content Partners	Disney	SONY Columbia, etc.	Warner Bros, Paramount , Viacom,CBS,MTV
Content Services Cover by Download	Disney Movie themed Games	Games and HD Films	HD TV Films, HD Movie Films
Network Services	Virtual Console	PlayStation Network	Xbox Live
Bundled ODD Spec	DVD	Blu-Ray DVD	HD DVD
SetTop Box Hardware Unit Price	NTD 7000+	NTD 15000/18000 For 20GB/60GB	NTD 13000 (Std version)

## *Why IP ?*

- Mainstream of the Media Converged Trend
- Everywhere and more Convenience/Cost Effective
- Means Intelligence
- Brings in more Services and Future Scalability
- Architecture could protect your investment
- Easily Expansion and Upgrade
- Open Converged Platform and Piggy-back other media and remove the restriction of channel/bandwidth

Component Price

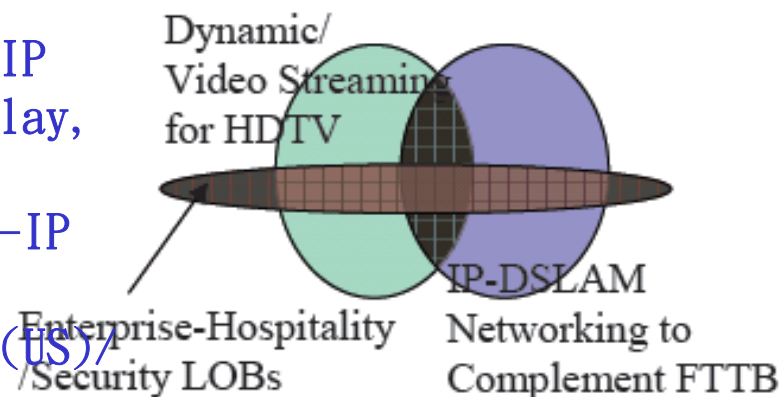
System Price/E2E Solution Value

Business Solution/Business Model Value



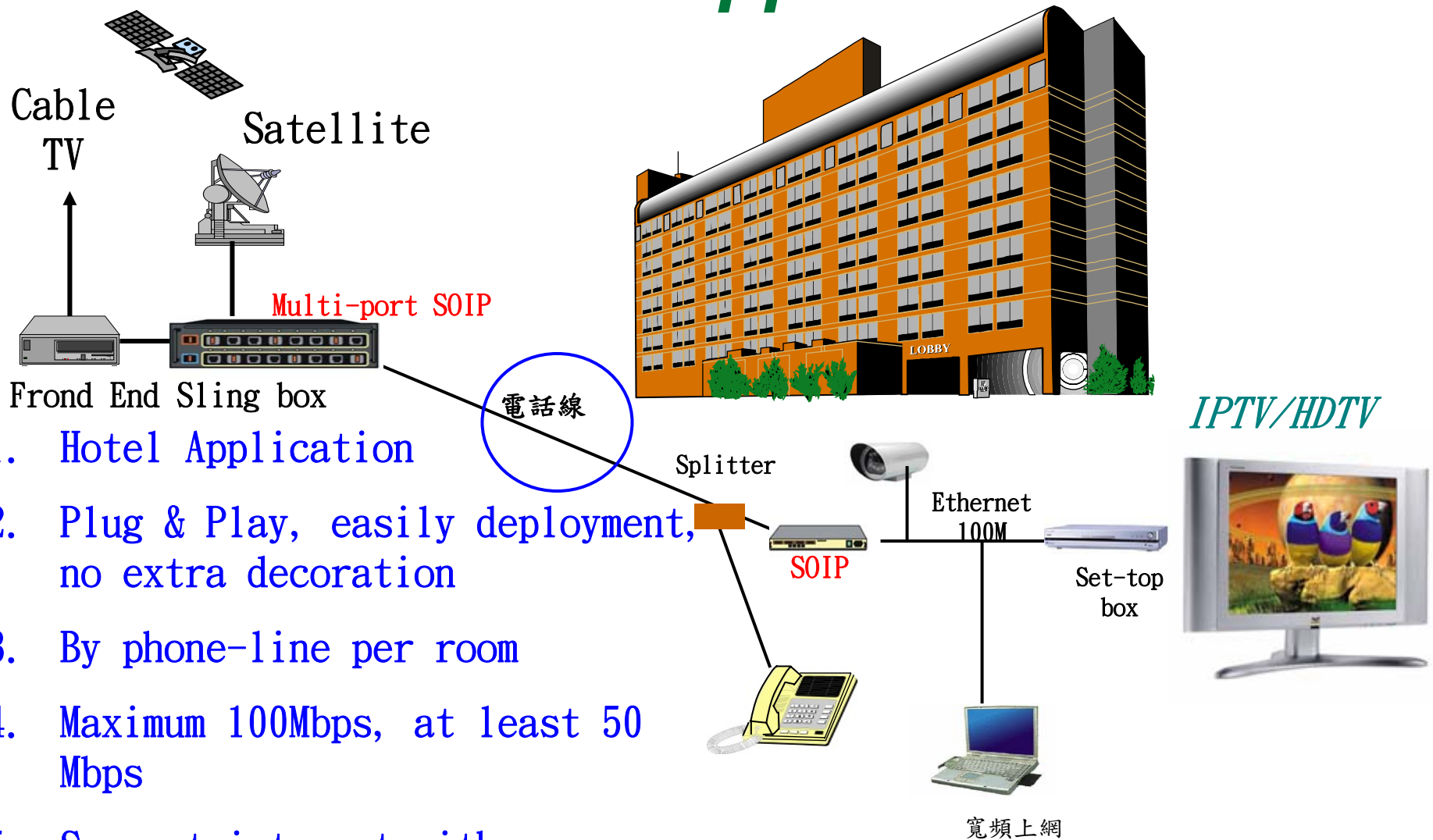
## Why VDSL Last Mile ?

- Leverage Existing Voice Infrastructure to IP
- Quick and Easy Deploy/Maintain (plug and play, 15 min Per CPE)
- Support High Definition Video-IP and Voice-IP
- Most Effective for both Budget and Timing
- Flexible, Quality, Easy-managed, Up-Stream(US)/Down-Stream(DS) Bandwidth Provision



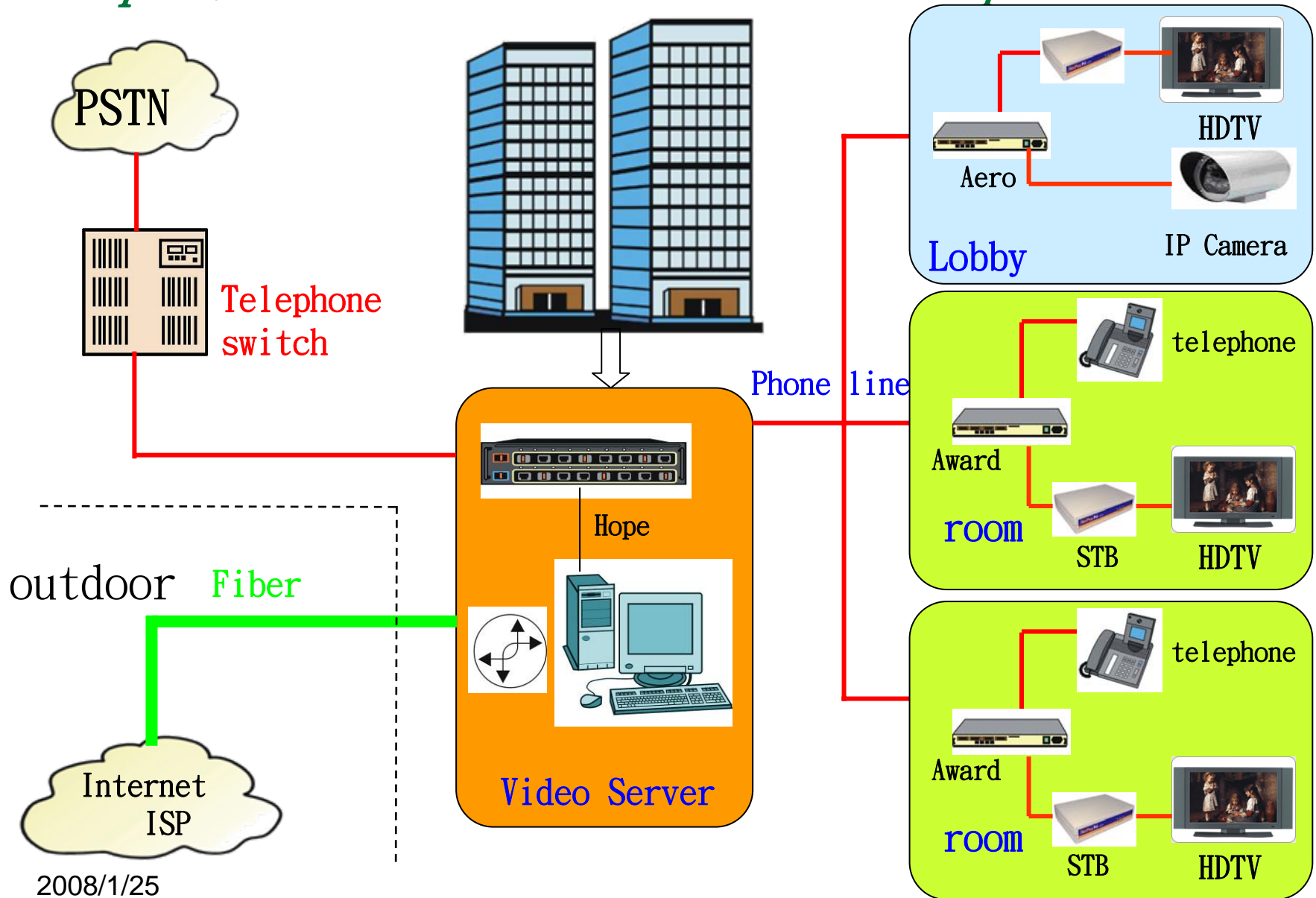
Vender Proposal/ Approach	How to have 50Mbps thruput Ethernet with diversified 900M radius coverage	Topology	Cost (\$ Budget) per loop E2E (excluding STB)	Time-To-Market (Time Budget) per loop E2E	Relative Management Effort(Install, Training,MA)
VDSL2 IP-DSLAM	VDSL2 Phone-Line Modem Pair	Concaved into existed phone lines	<250 USD	15 min/CPE	Low
GE/FE-TX Approach	Multiservices Multi-Tiered TX Switches	Triangle Hierarchy Ideal for 100~500M	>300~400 USD Per 200M	1~2 hr/Door; 2~3 Day/Floor	H:CCDA/CCNA
Fiber GE/FE Approach	Multiservices Fiber Switches with GE/FX Transiver,Fiber Junction Labor	Long Slimmed Triangle Hierarchy Ideal for KM	>500 USD	1~2 hr/Door; 2~3 Day/Floor	Highest:CCDA +Senior Junction FE Workers

## Full HD IPTV application in Hotel



1. Hotel Application
2. Plug & Play, easily deployment, no extra decoration
3. By phone-line per room
4. Maximum 100Mbps, at least 50 Mbps
5. Support internet either

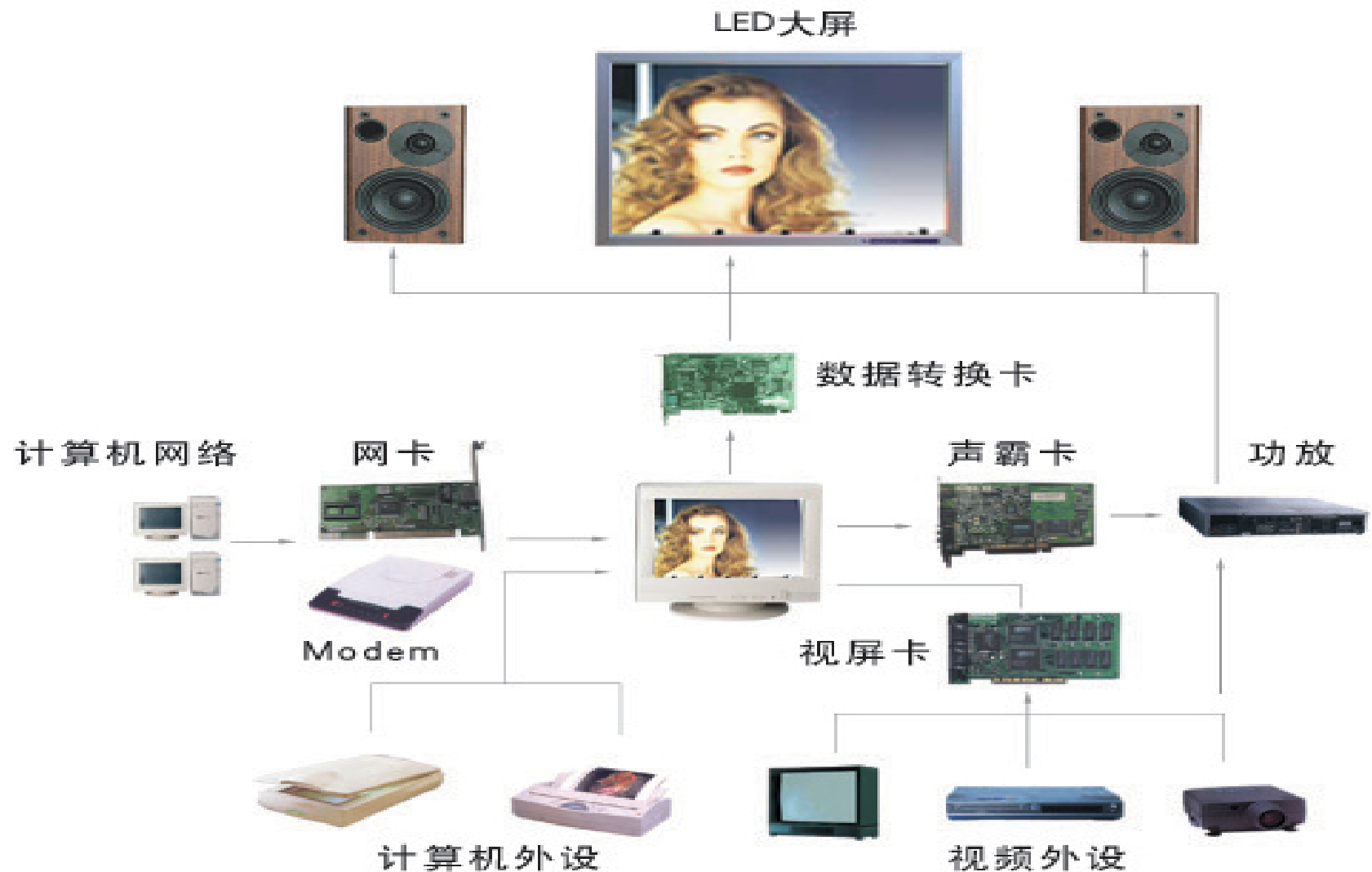
## Example: Hotel/Mansion/Motel buildup



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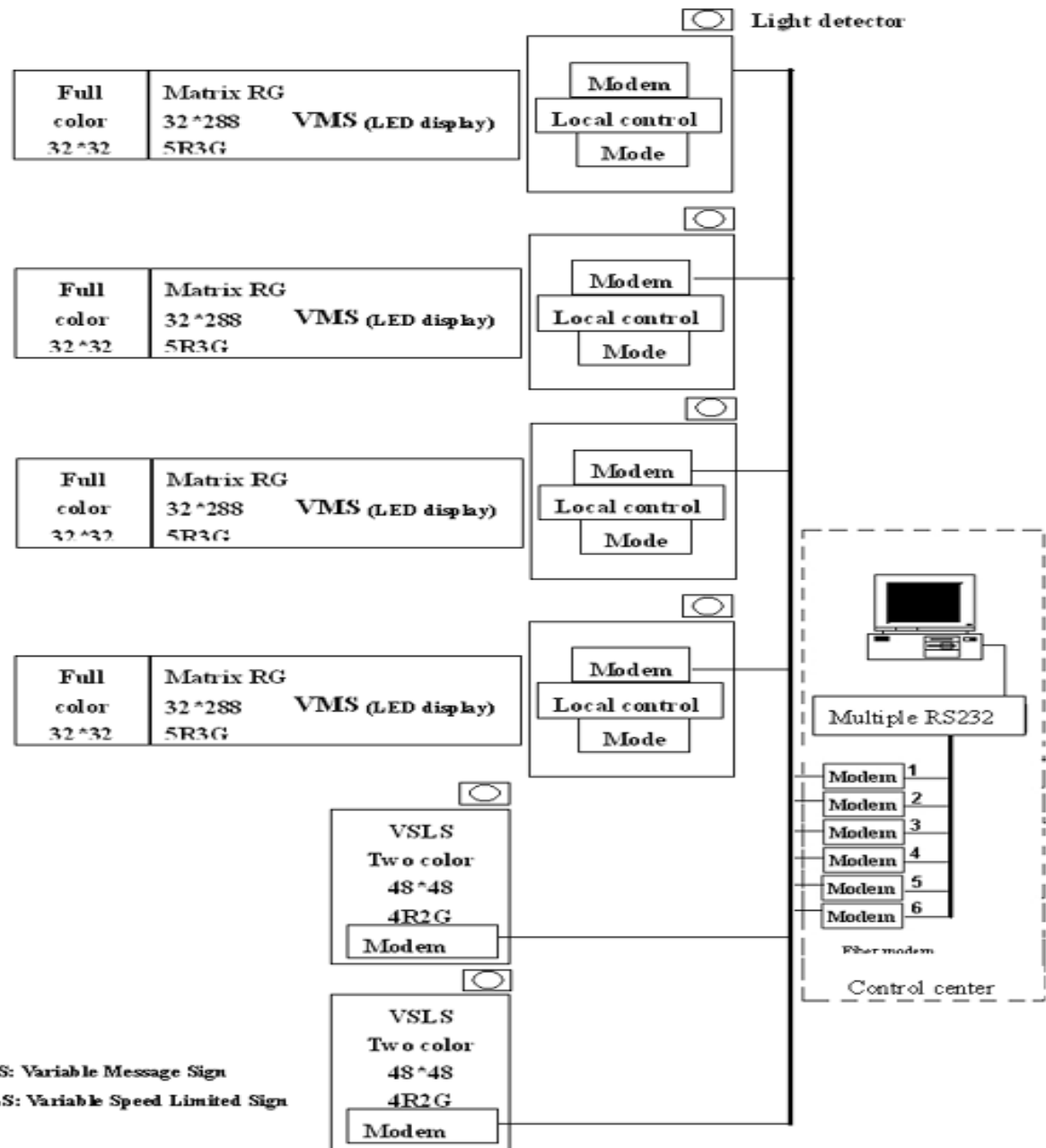
## Outdoor/Indoor LED DISPLAY



## Traffic Lamp and Horse-Running Lamp

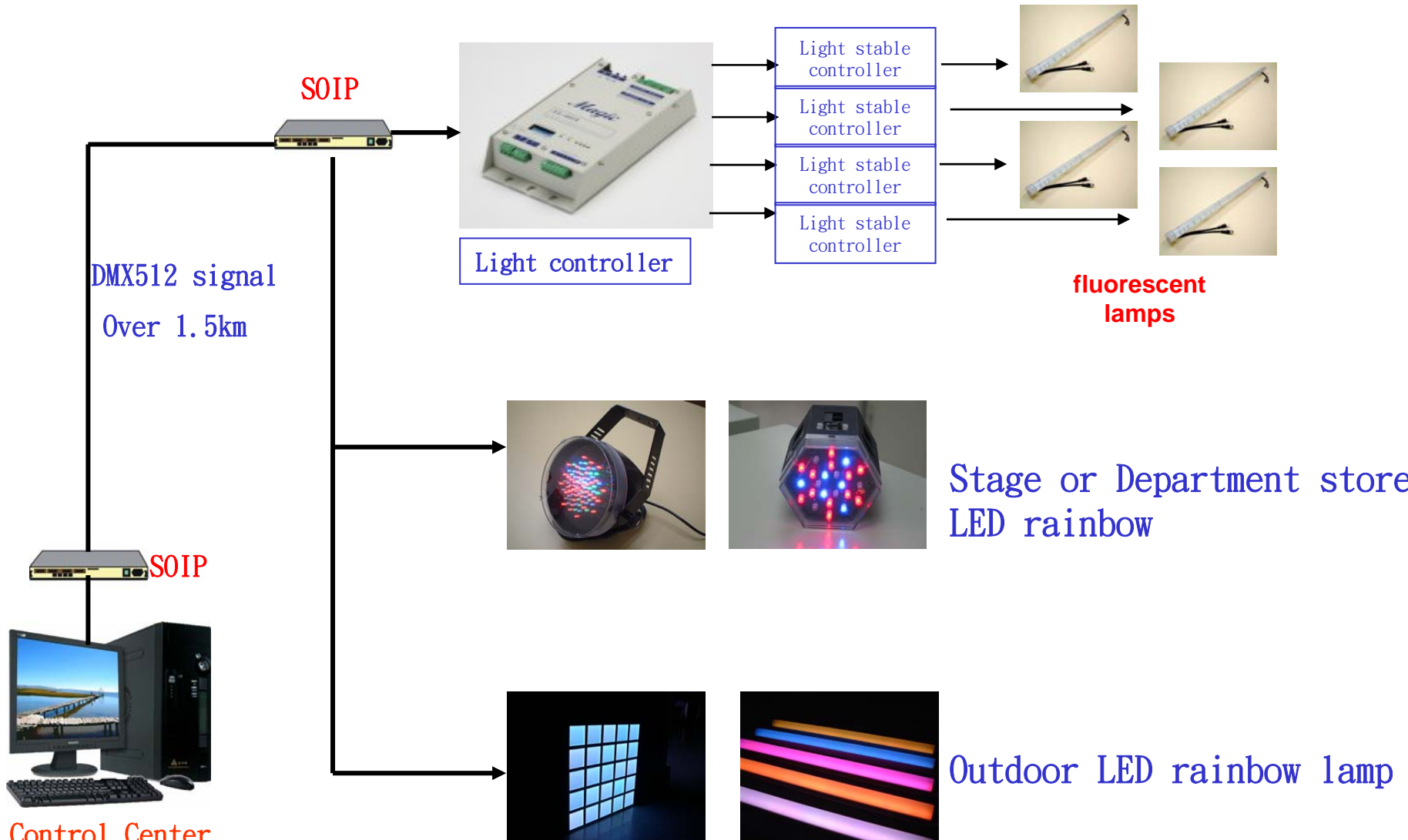


2000/1/20





## Platform Stage, Department Store, Rainbow Light



## ***Advantages***

- Module solution.
- Plug & Play, no more man-wire cost, by hone-line or coax cable
- Wide Bandwidth, maximum 100Mbps bidirection
- Long reach/support PoE, be Suitable in street, bridge, and Tunnel...etc
- good performance in noisy environment, such as elevator, train rail and tunnel...etc
- Integrating RS232, RS485, DMX512 signal, can apply in industrial control, home security and transportation control



## *IP Communication in Your Life*

- ❖ Surveillance and Security over IP
- ❖ Advertising and Video/Audio broadcast over IP
- ❖ RS232/RS485/DMX512 over IP
- ❖ Industrial Control over IP
  - Plug & Play, Fast installation
  - High bandwidth, maximum data rate is 100Mbps/60Mbps, 12Mbps/8Mbps over 1.5Km
  - Long reach distance over 1.5Km, no any repeaters need
  - “No New Wire” , Saving man-made wiring cost. Coaxial cable, Telephone line and Ethernet line cover anywhere

