

Medical WG Technology session APAN 32nd meeting at New Delhi

HD-SCR and Tele-Pointer

Chairpersons:

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Torata N and Cao Duc Minh, Kyushu University Hospital.



Participating sites

New Delhi venue, IN

Kyushu University Hospital, JP

Fukuoka University Hospital, JP

National Taiwan University, TW

National Agency for Science and Technology Information (NASATI), VN

Cho Ray Hospital, VN

Advanced Science and Technology Institute (ASTI), PH

University of the Philippines Manila, PH

University of Hong Kong, CN

Korea Institute of Science and Technology Information (KISTI), KR

Hanyang University, KR

Seattle Science Foundation, US

12 sites

IN:1, JP: 2, TW: 1, VN: 2, PH: 2, CN: 1, KR: 2, US: 1

Introduction

*DVTS plays central part in our telemedicine activity.

Advantage: High frame rate, DV quality image.

Disadvantage: High bandwidth, NTSC dedicated.

*Next generation conference system is desired.

Hi quality HD image support (Low compression, High frame rate),

NTSC/PAL compatibility, Multipoint connection (over 10),

Easy preparation, Easy sound handling,

Tele-Pointer: Visual collaborative pointing interface for teleconference

HiDVTS: Impossible to connect multipoint.

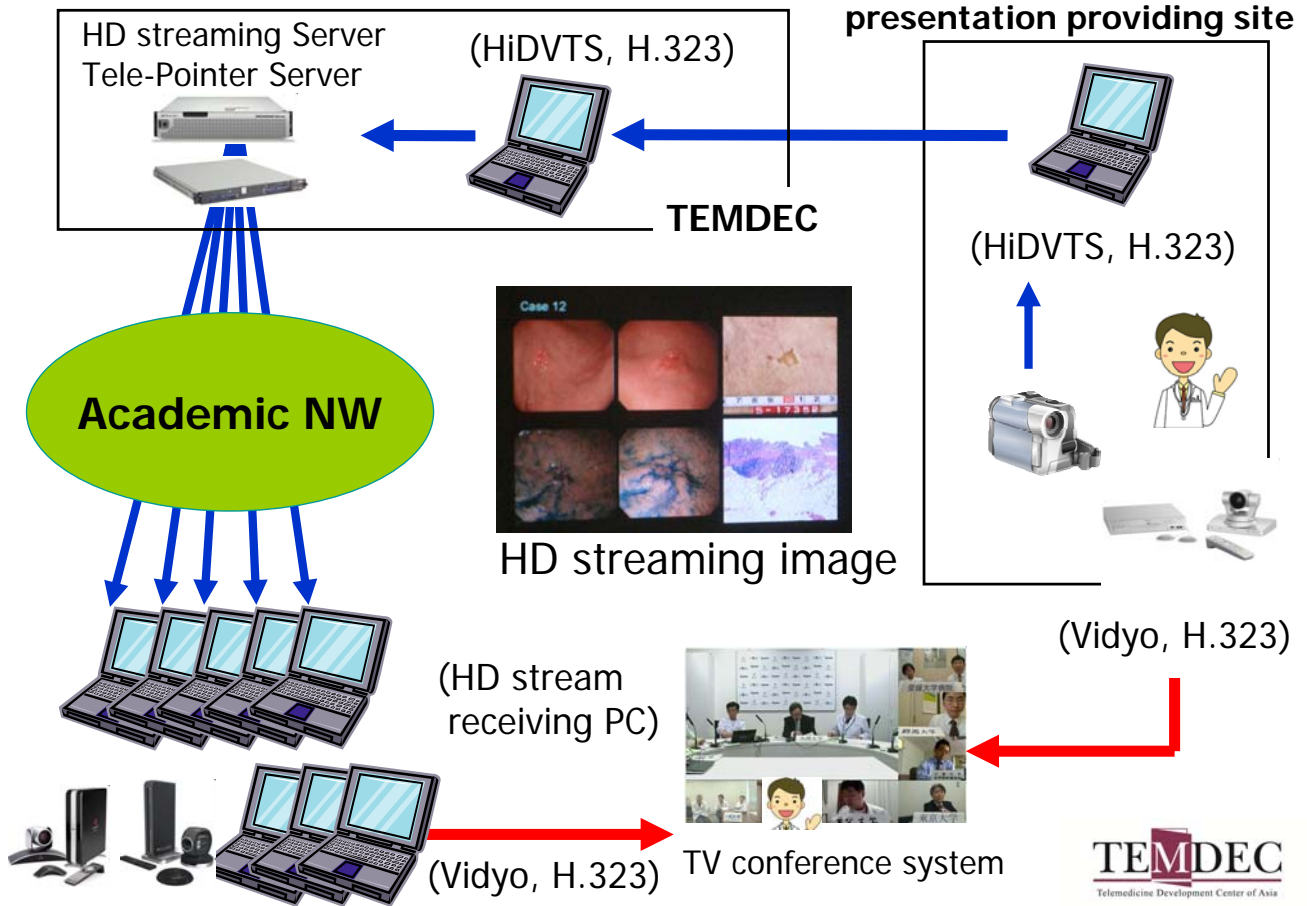
H.323 compatibles: There is an advantage of easy handling but they support hi-compressed image only.

Streaming system: There are advantages of image quality, easy handling and preparation but it does not support remote conversation.

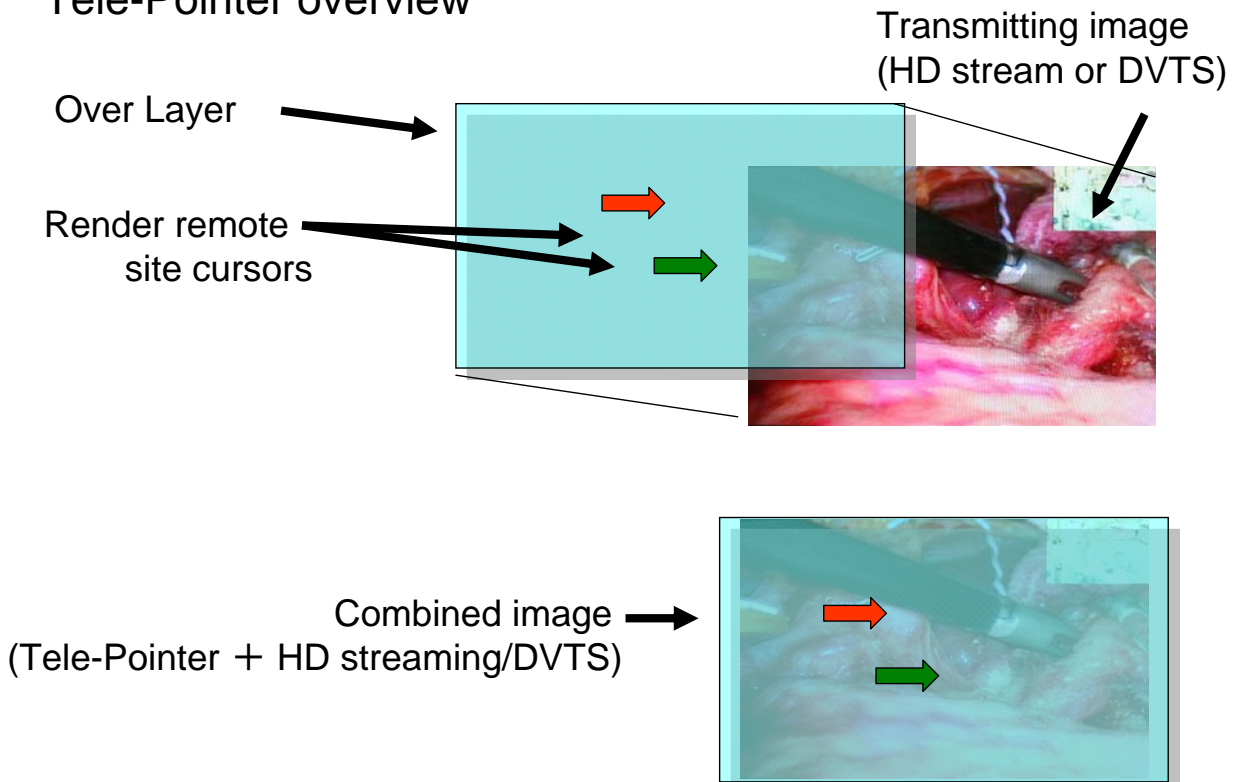
Tele-Pointer : Good solution does not exist currently.



Combine few systems to meet our requirements.



Tele-Pointer overview



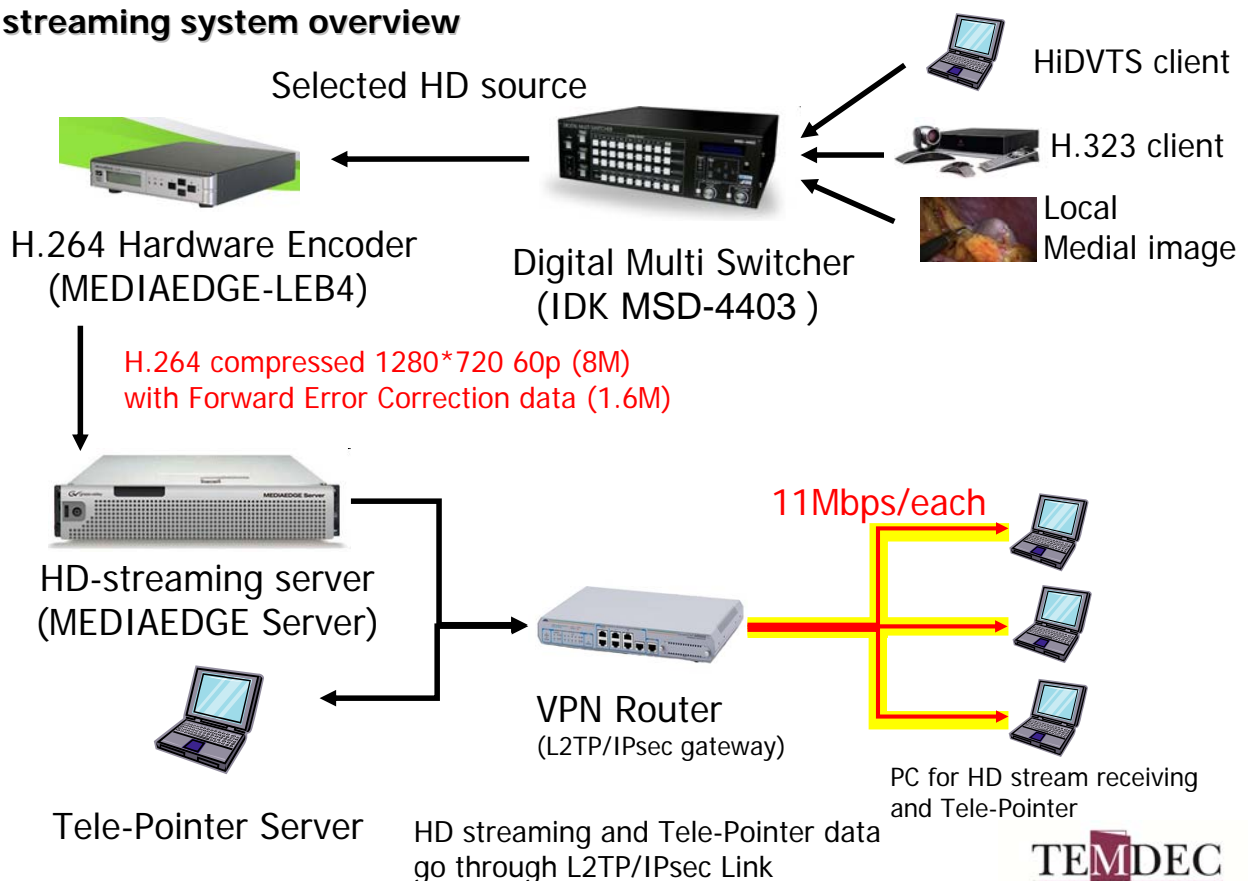
Tele-Pointer specifications

- *Server-Client type commercial software.
- *Operates with Windows PC.
- *Accepts five cursors rendering at once.
- *Accepts twenty clients connections.
- *All clients can get cursor control authority.
- *The client software can be distributed.

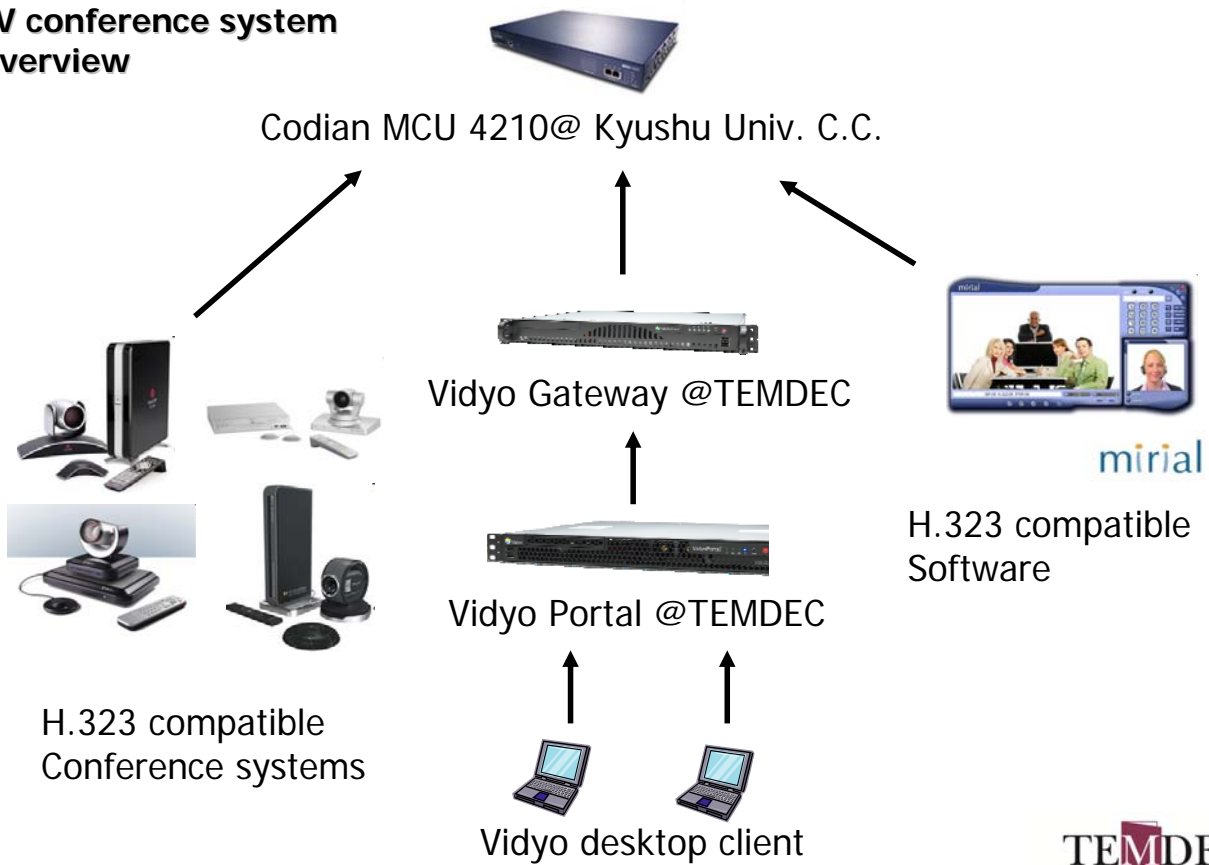
Tele-Pointer is developed for our purpose by INTEC Inc, Japan.

This solution expects to use with other image transmitting solutions, like streaming system or DVTS.

HD streaming system overview



TV conference system
Overview



H.323 Compatible system

or



HD stream receiving PC

Display devices

PC **Audio visual devices**

Vidyo, Mirial

Achievements of HD-SCR

- *Hi quality HD image :1280*720 60p H.264 8Mbps
- *NTSC/PAL compatibility: accepts both signal
- *Multipoint connection: up to 20 sites ?
(One HD streaming server supports 200M streams in total.)
- *Easy preparation: one conference device and one PC
- *Easy sound handling: undertook by TV conference system
- *Tele-Pointer: realized by new software

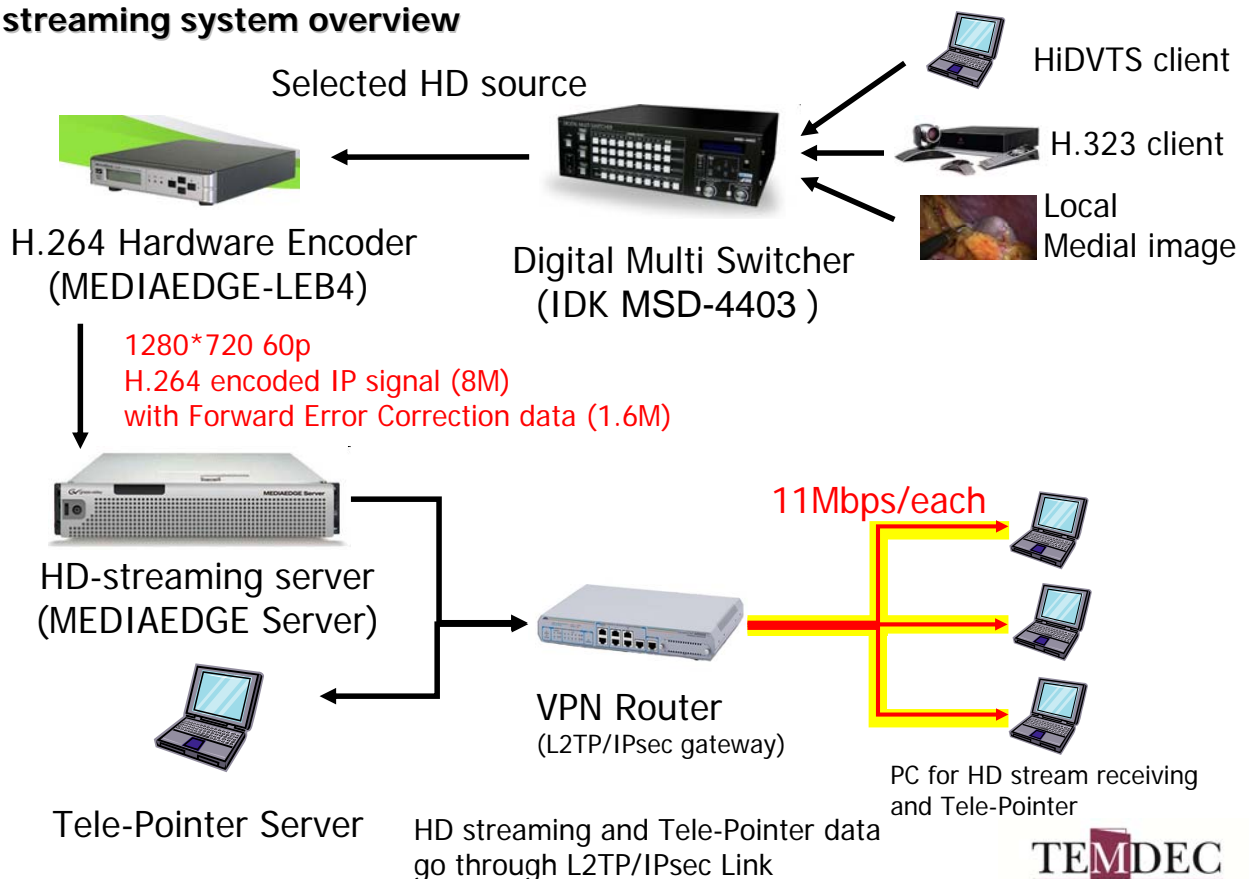
Challenges facing HD-SCR

- *Reduce time delay of HD stream: 2-4sec.
- *Investigate better way to transmit HD quality image from presentation providing site to TEMDEC.
 - HiDVTS: more sensitive to packet lost than DVTS.
 - H.323: quality depends on a terminal specification.
 - VLC media player: Long time delay
- *Gain experience of HD-SCR through this telemedicine activities.

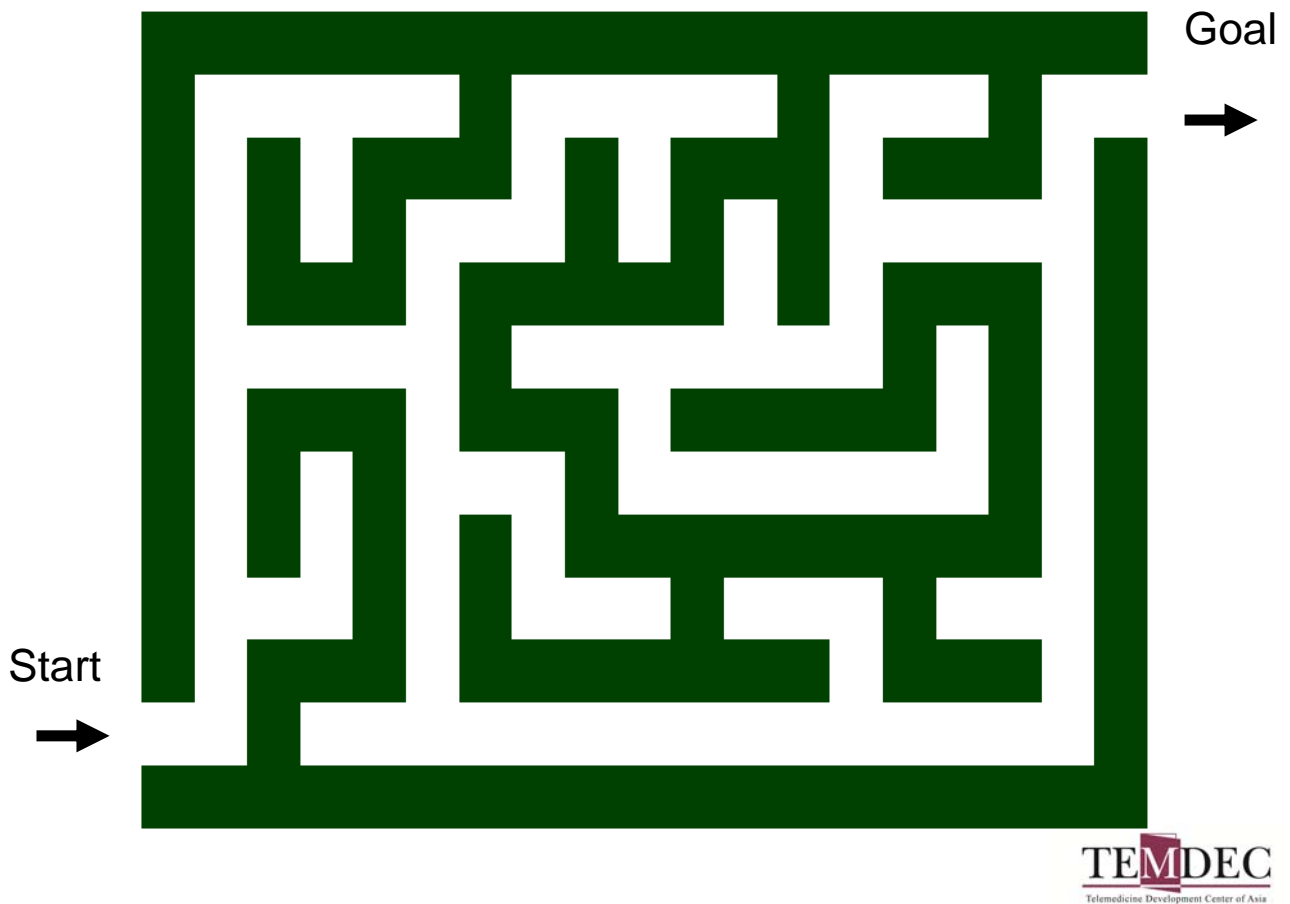
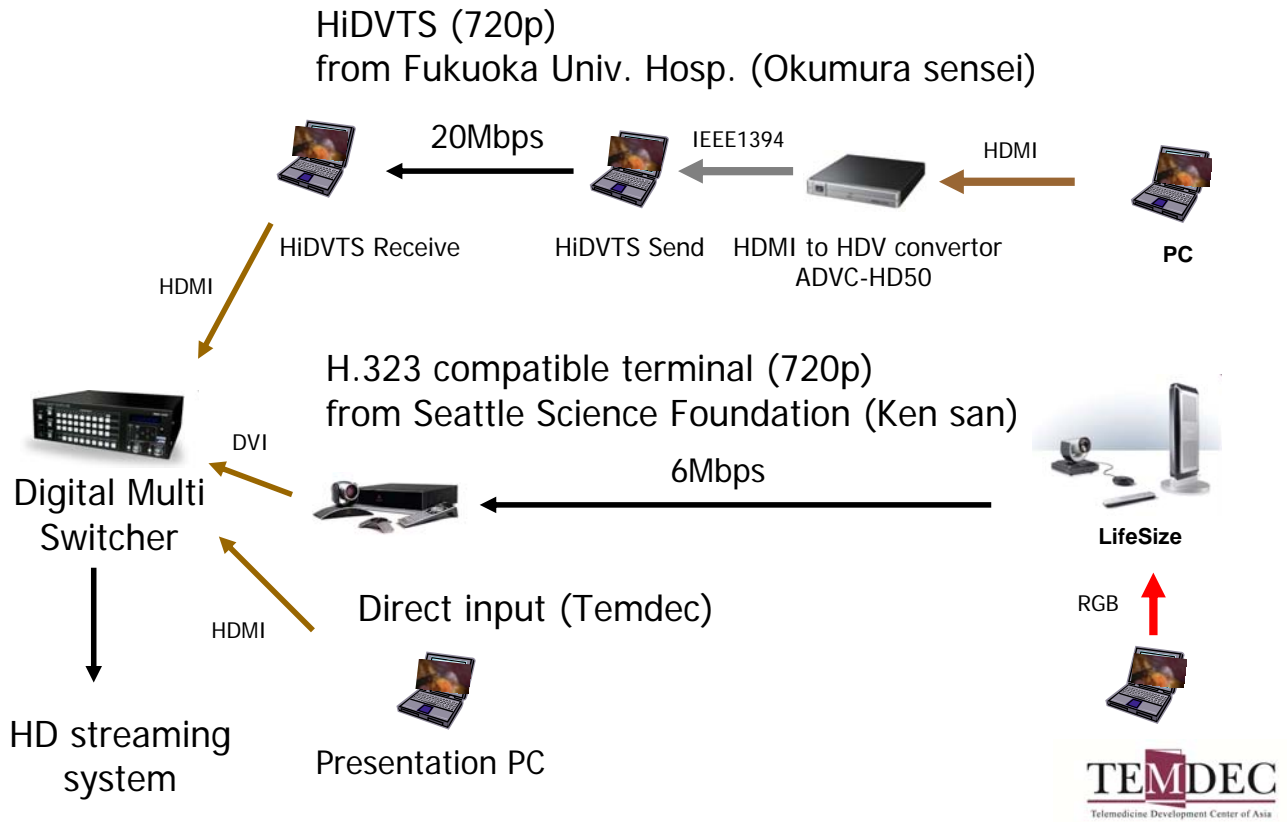
Demonstration HD-SCR

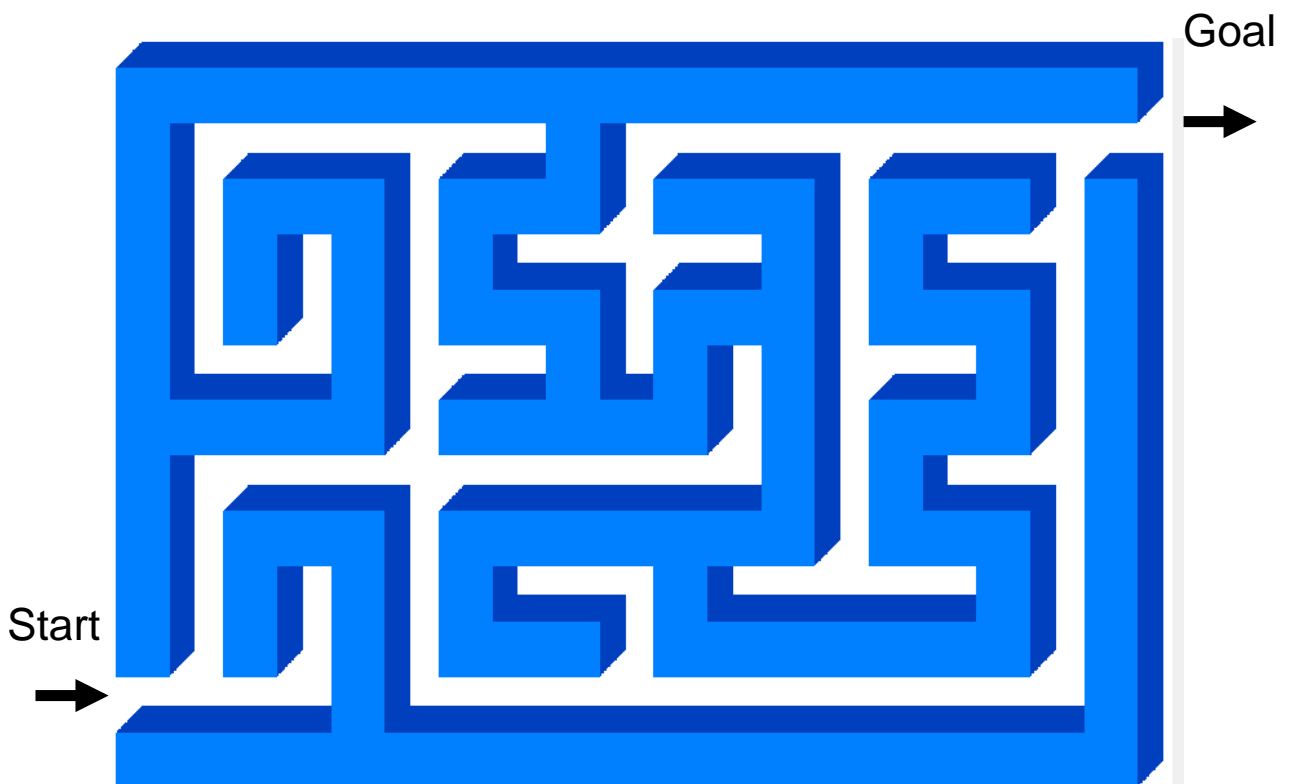
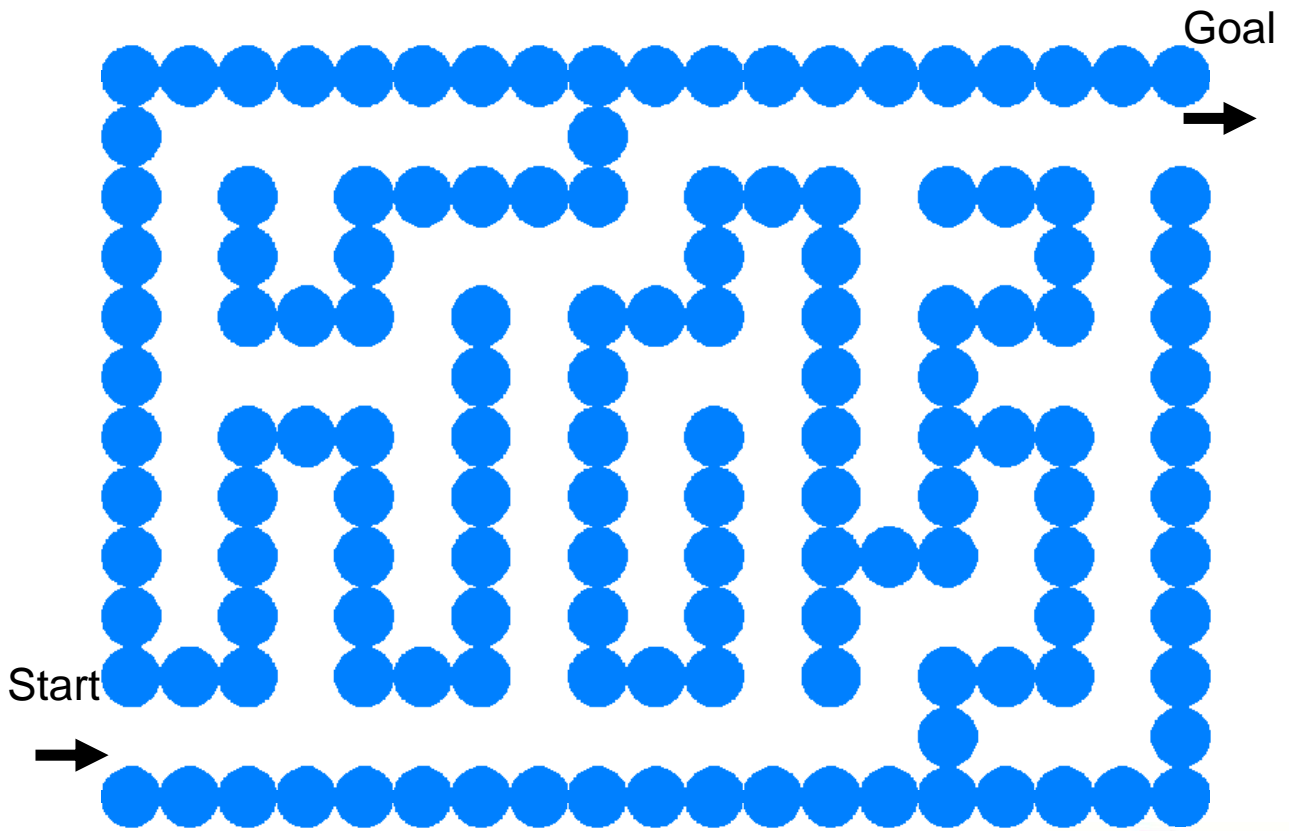


HD streaming system overview



HD contents from 3 sites





Where _____ san is?



Cost of HD-SCR and Tele-Pointer

