

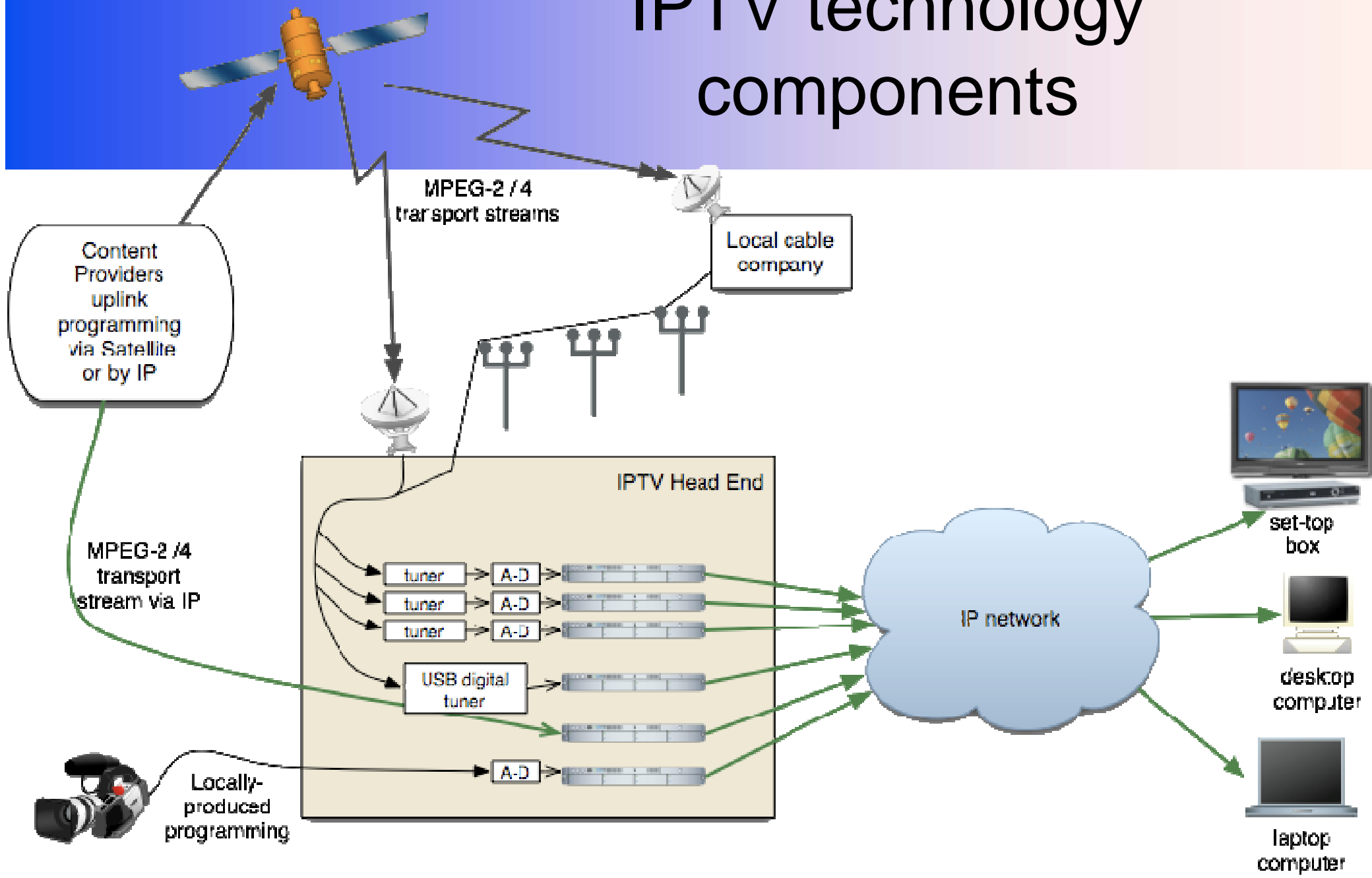
Technical Overview of IPTV Capabilities

Laurie Kirchmeier, Merit Network Inc.

IPTV Technology Components

- Content Origination
- Digitization & Distribution
- Digital Rights Management
- Customer viewer hardware & software

IPTV technology components

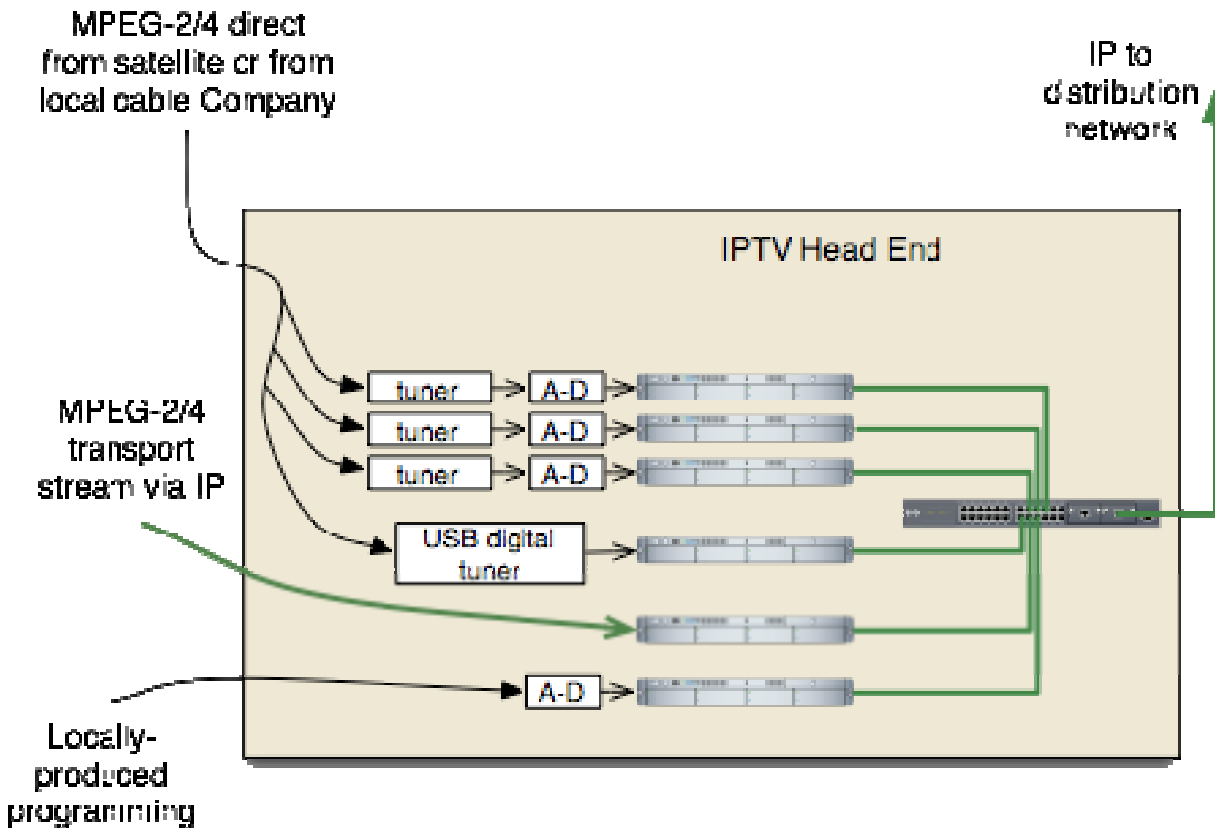


Content Origination

- Via satellite - MPEG2 compressed digital streams
- From local cable company
- From content provider - via IP
- Locally produced content

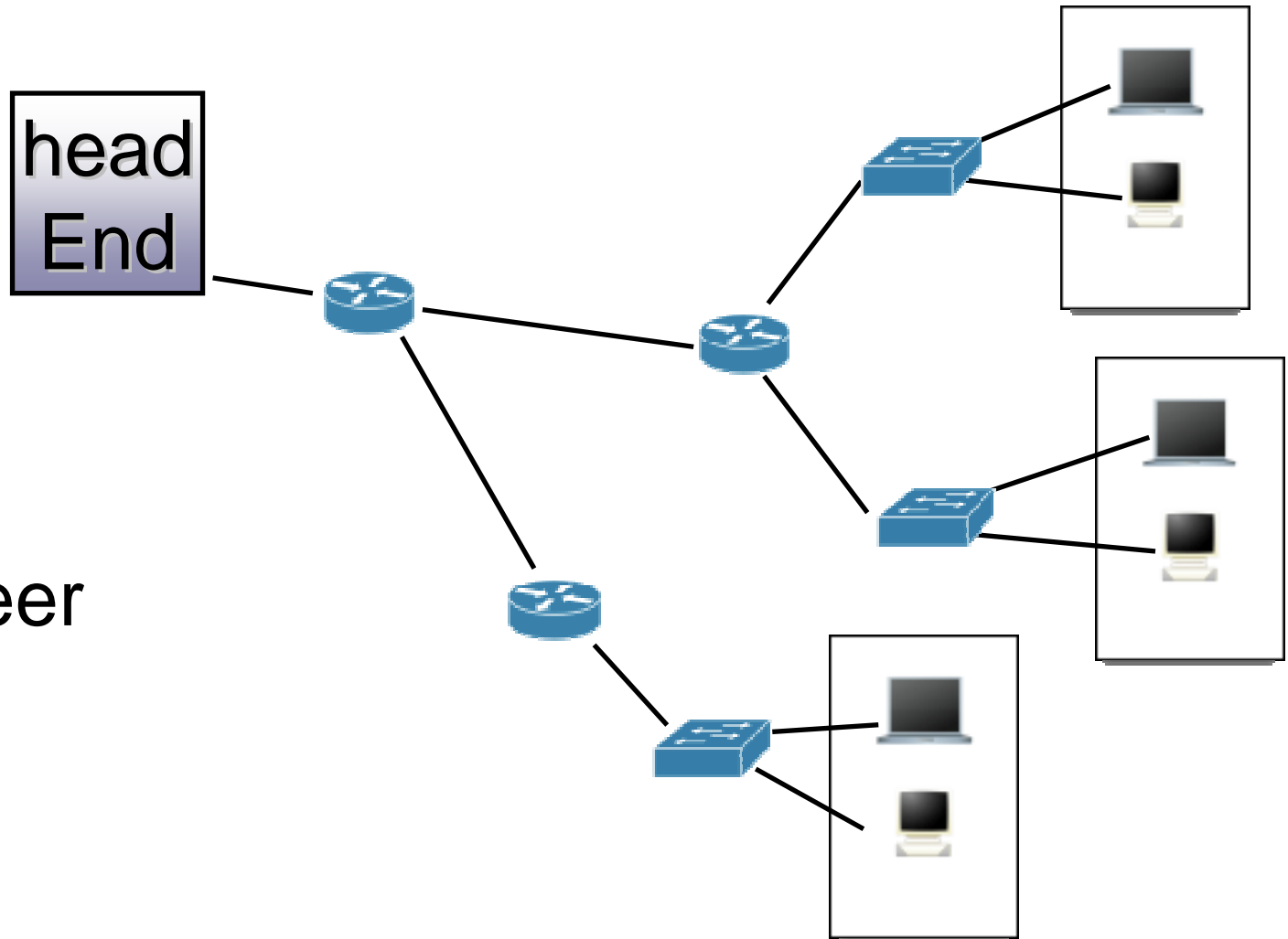
Digitization/Streaming

- inputs:
- MPEG-2/4
- analog video
- output streams:
- MPEG-2/4, H.264
- Windows Media

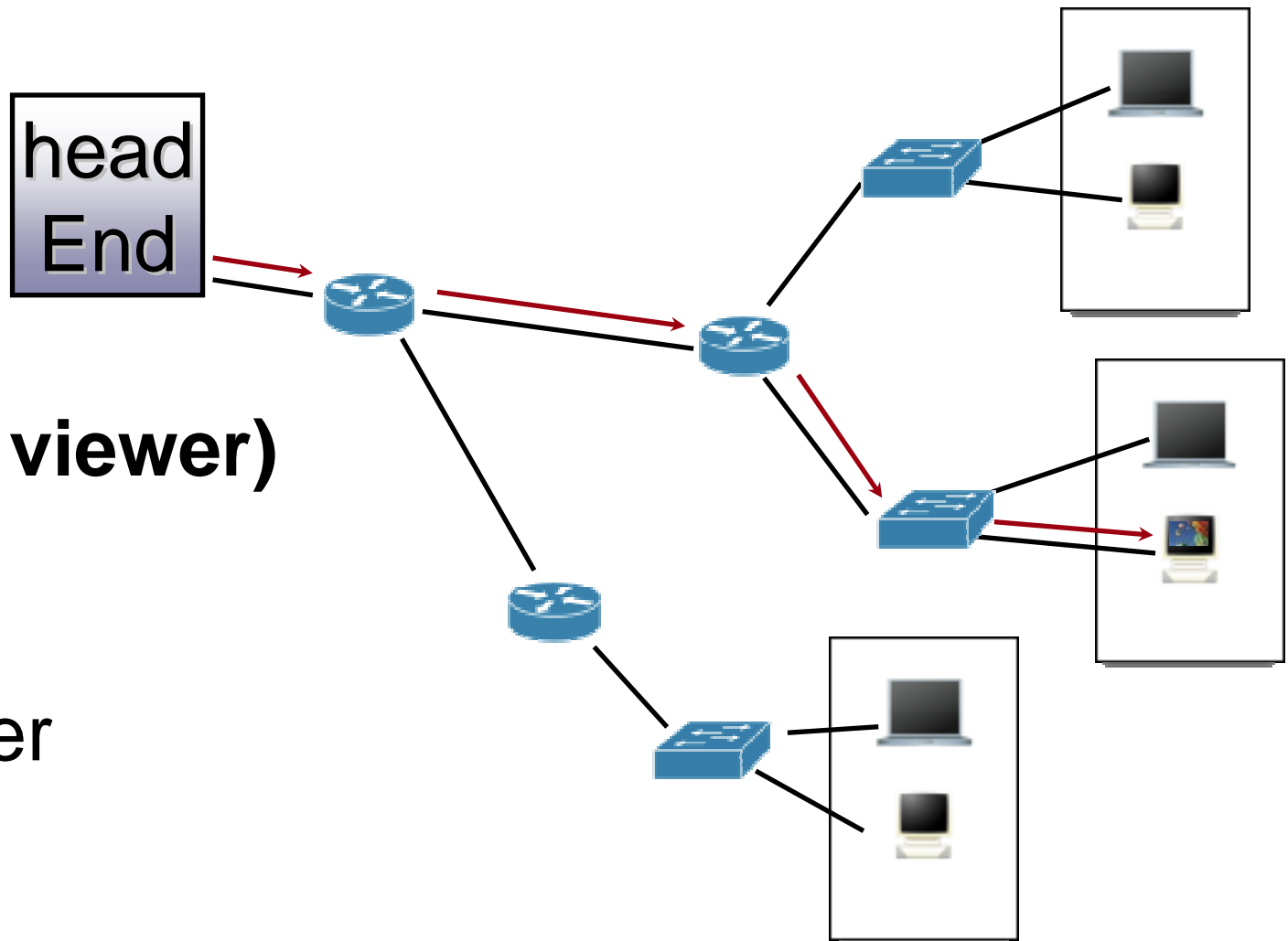


IP Distribution

- Unicast
- Multicast
- Peer to Peer

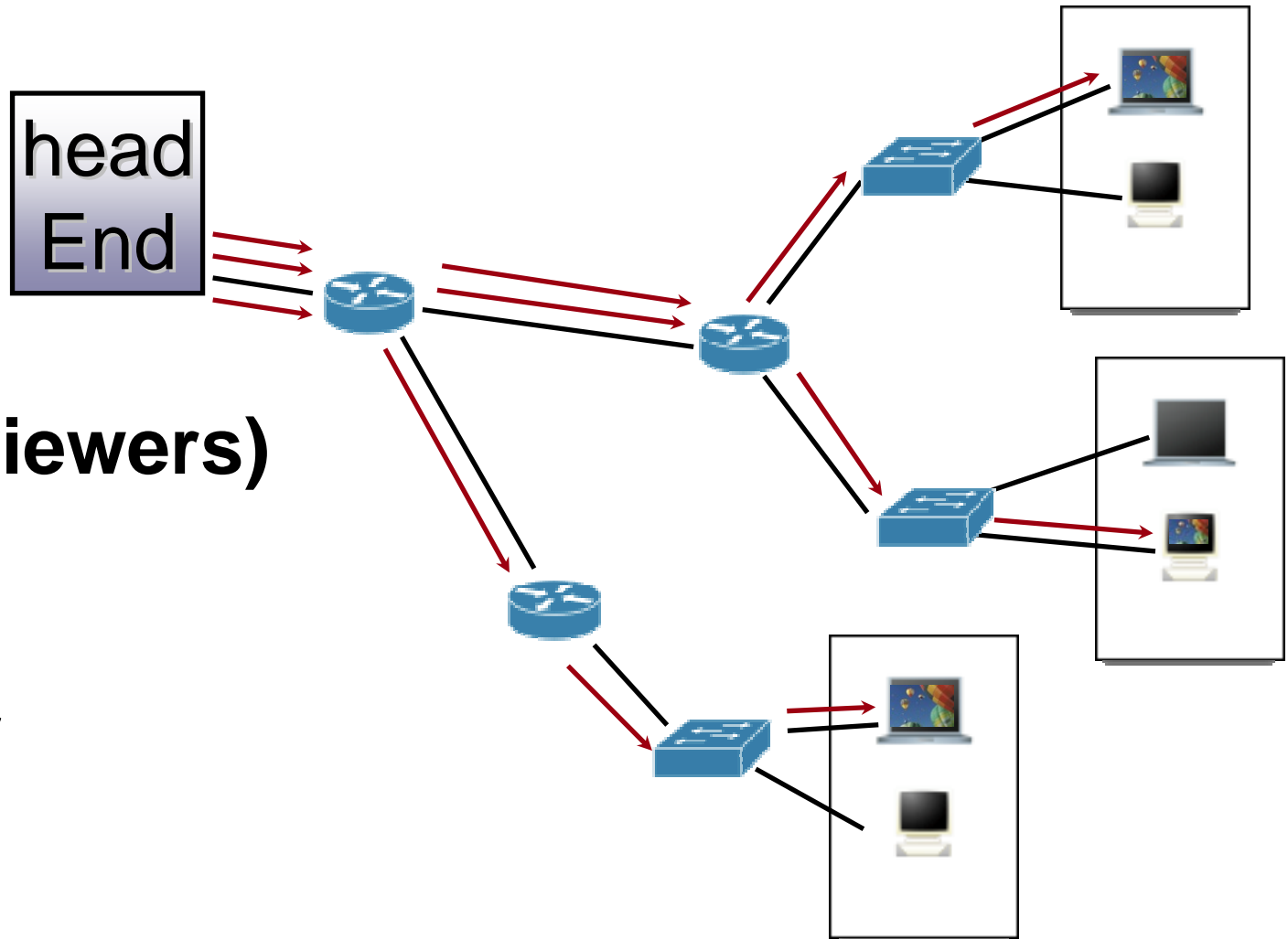


IP Distribution



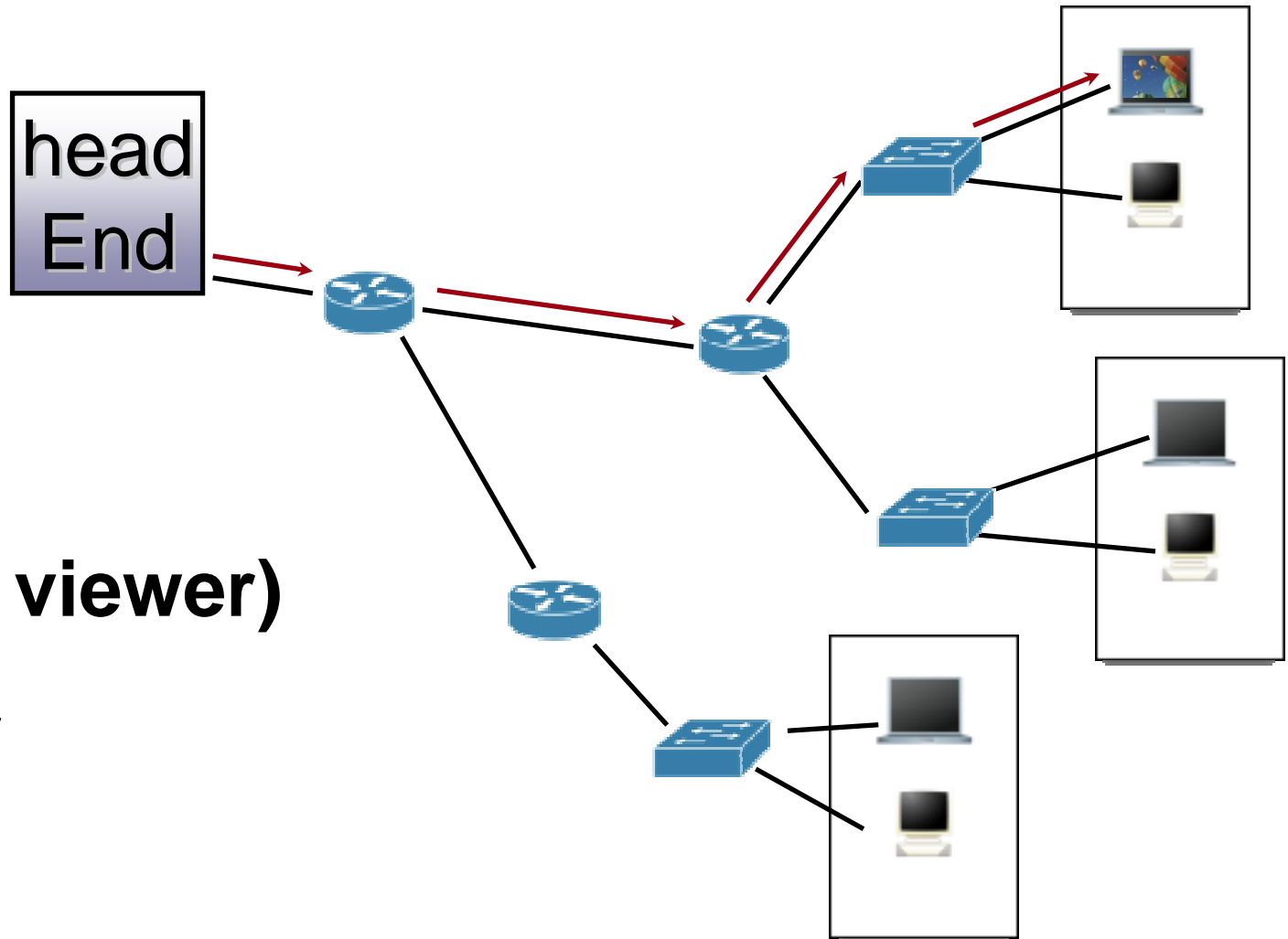
- **Unicast (1 viewer)**
- Multicast
- Peer to Peer

IP Distribution



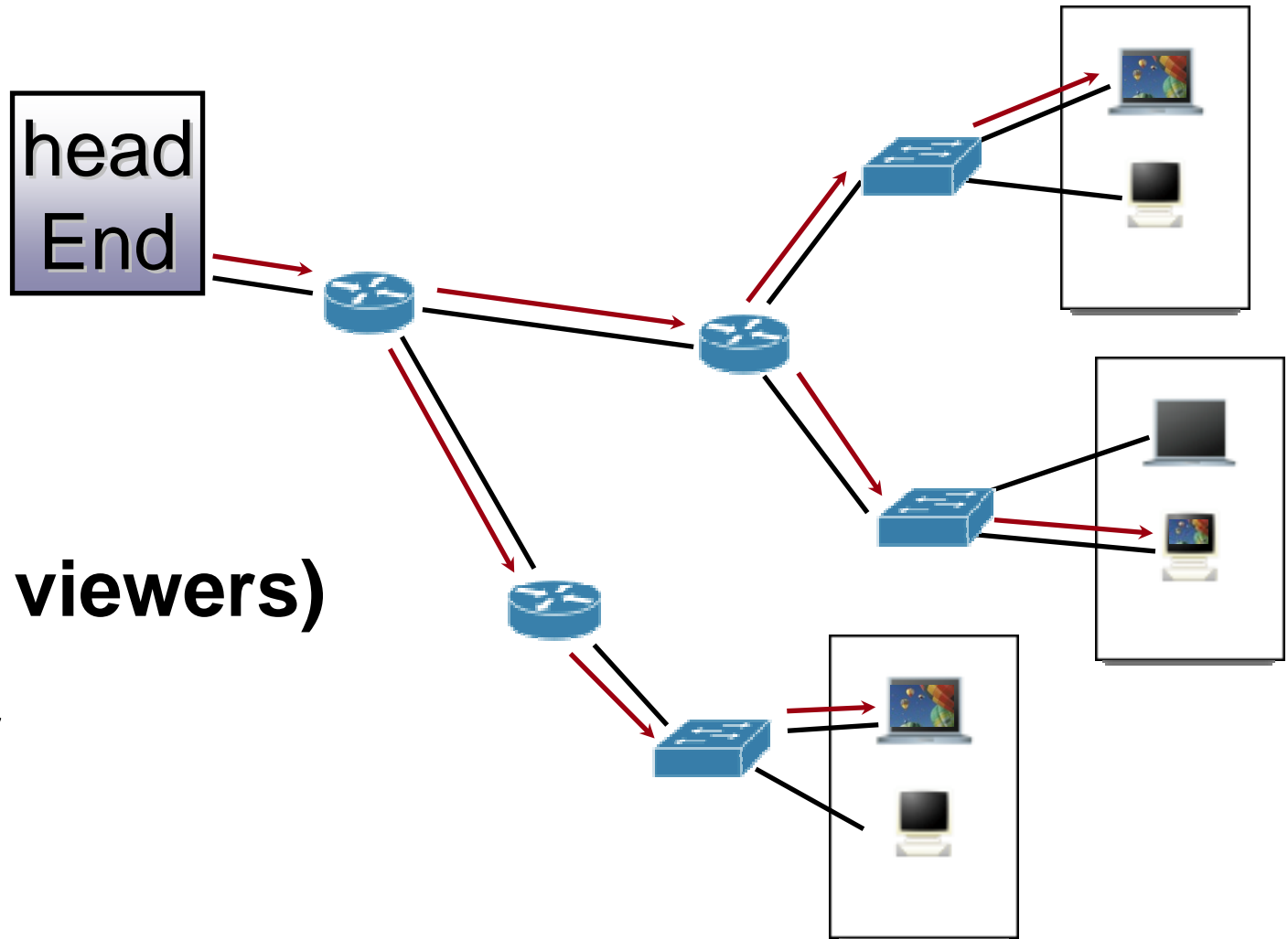
- **Unicast (3 viewers)**
- Multicast
- Peer to Peer

IP Distribution



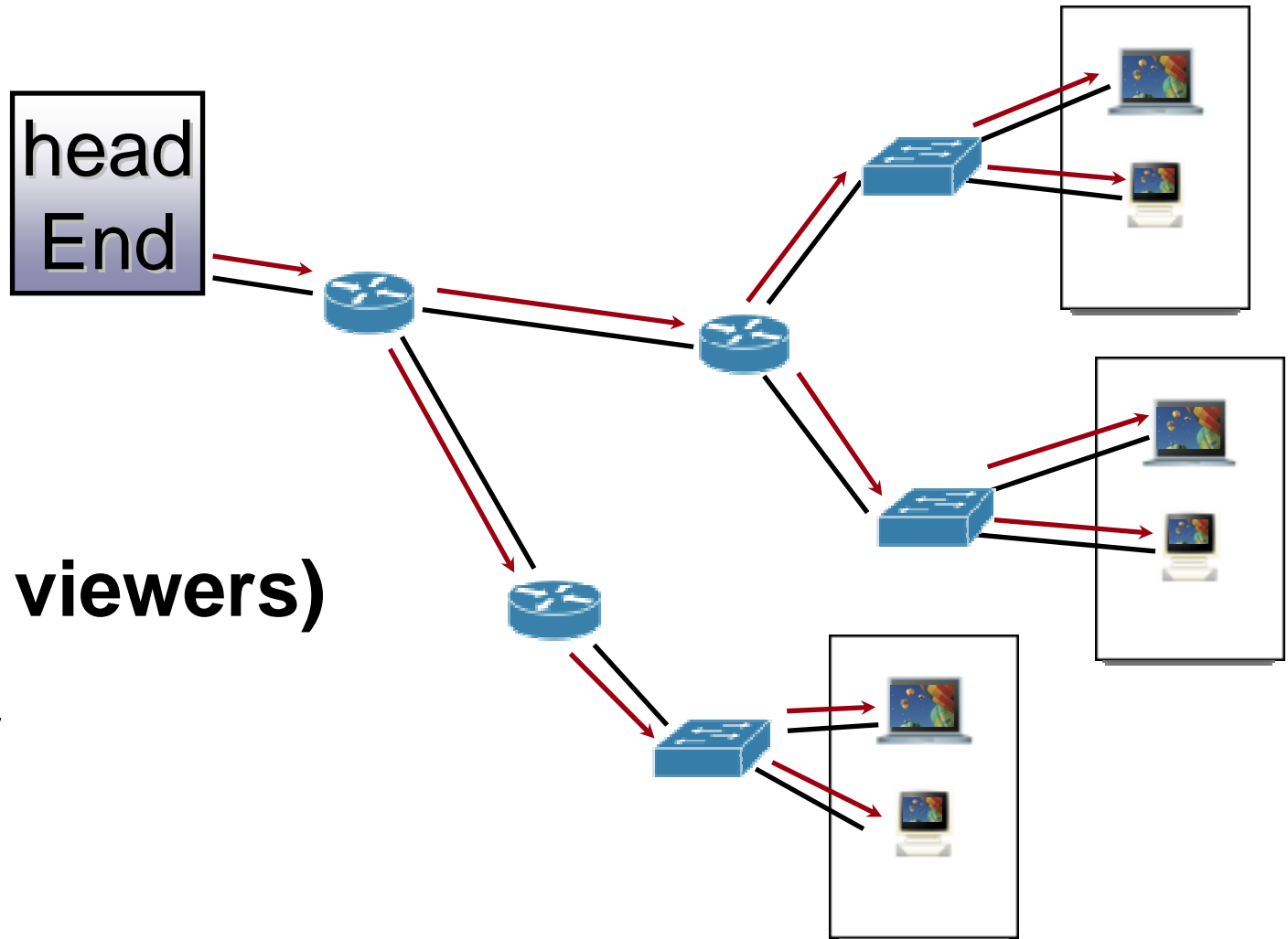
- Unicast
- **Multicast (1 viewer)**
- Peer to Peer

IP Distribution



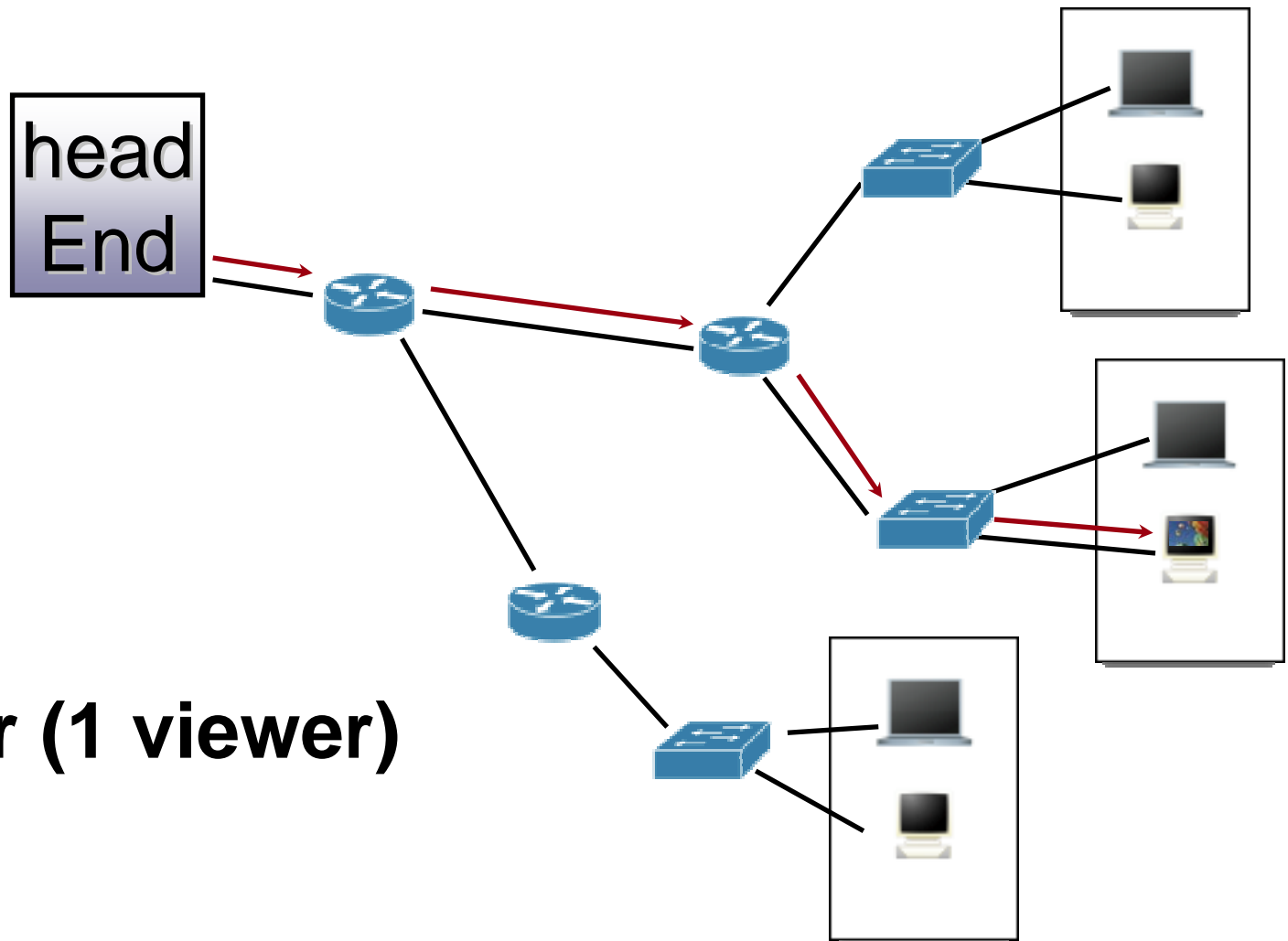
- Unicast
- **Multicast (3 viewers)**
- Peer to Peer

IP Distribution



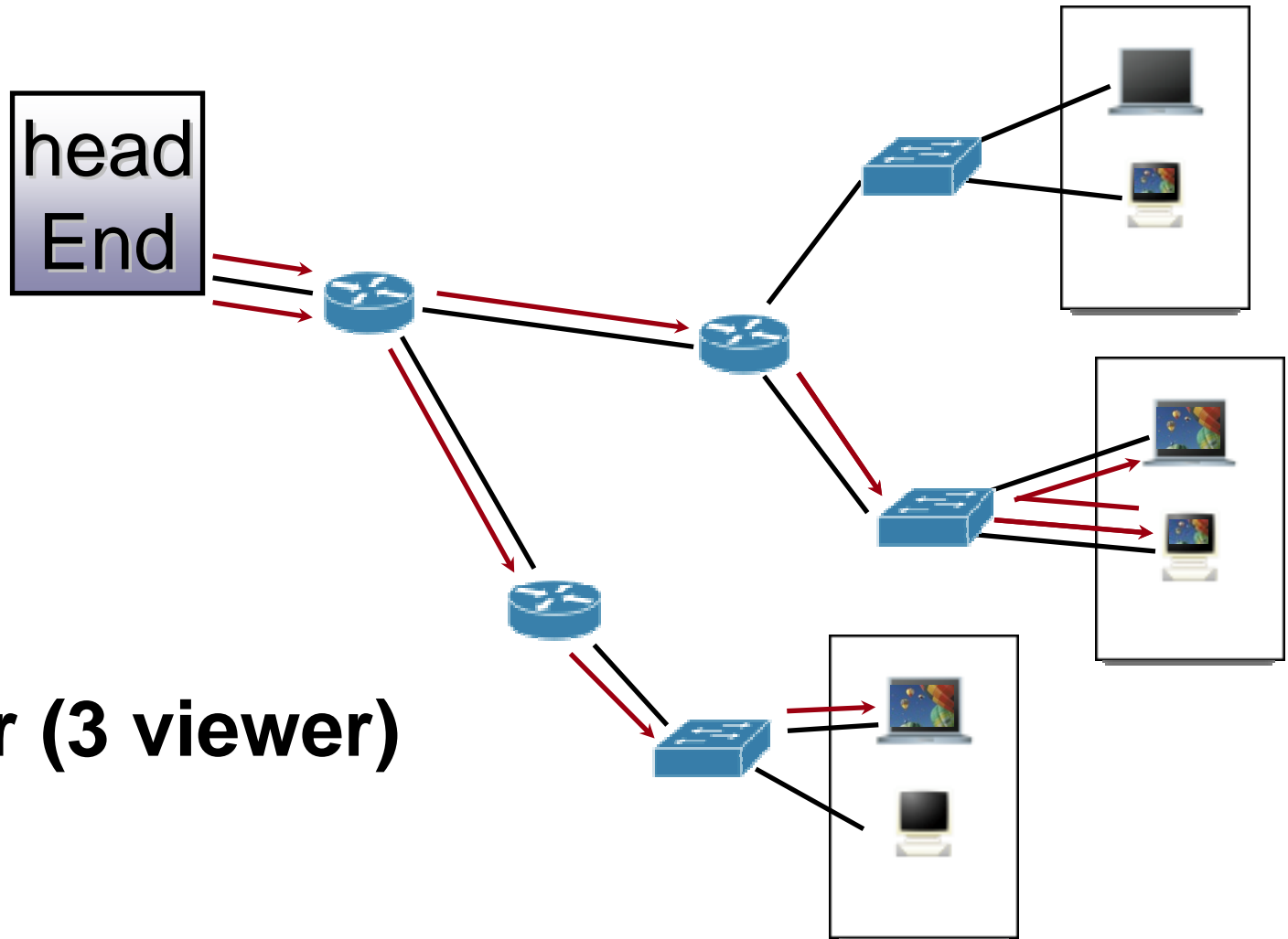
- Unicast
- **Multicast (6 viewers)**
- Peer to Peer

IP Distribution



- Unicast
- Multicast
- Peer to Peer (1 viewer)

IP Distribution



- Unicast
- Multicast
- Peer to Peer (3 viewer)

Digital Rights Management

- DRM components
 - Packaging
 - Distribution
 - Establishing a license server
 - License acquisition
 - Playing the digital media file
- Windows Media 10 DRM available
- MPEG-2/4 DRM available

Viewer hardware/software

- hardware: set-top box
 - appliance box
 - DRM available
 - approved by content providers
- Software
 - Windows Media Player
 - VideoLan Player/StreamPlayer
 - QuickTime

demonstration

- UCTV International
 - 42 channels
 - MPEG-2 & H.264 streams
 - multicast works!!

Questions

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references

UCTV International

<http://uctv.canberra.edu.au/uctv-intl>