

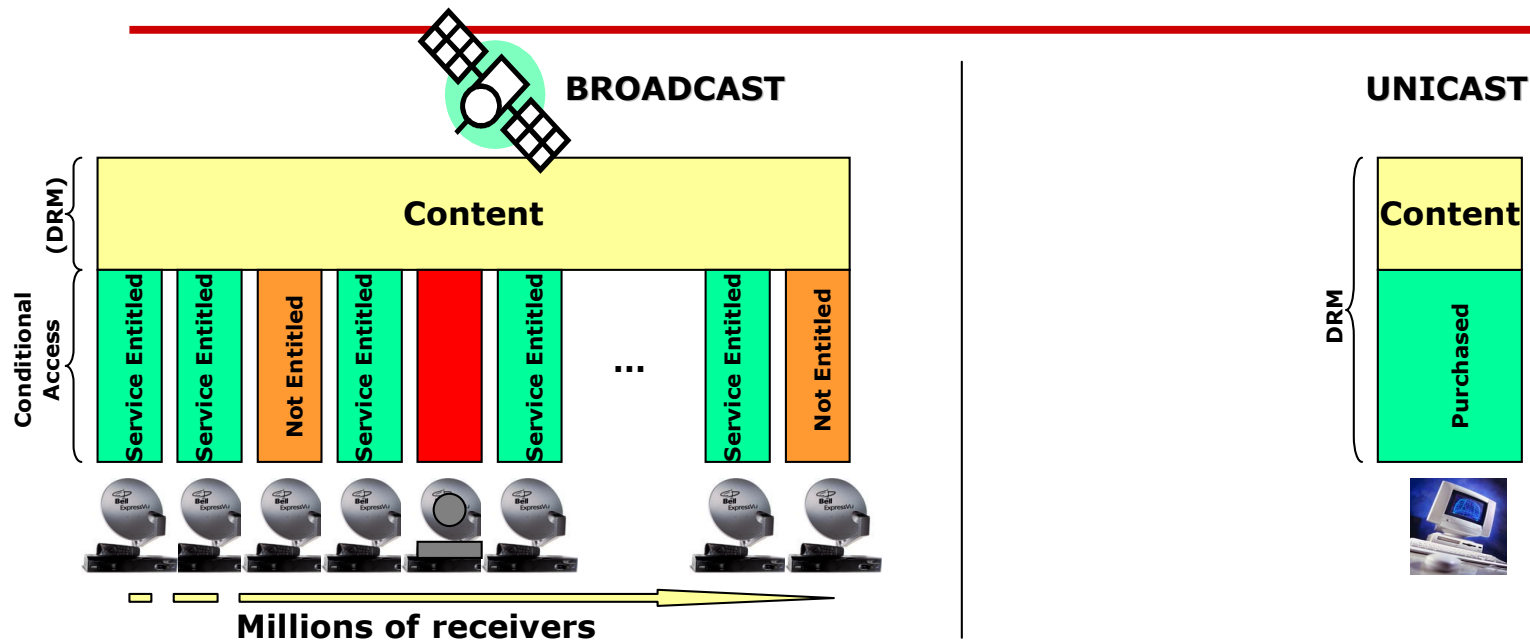
# Persistent Rights Management for Digital Broadcast Services

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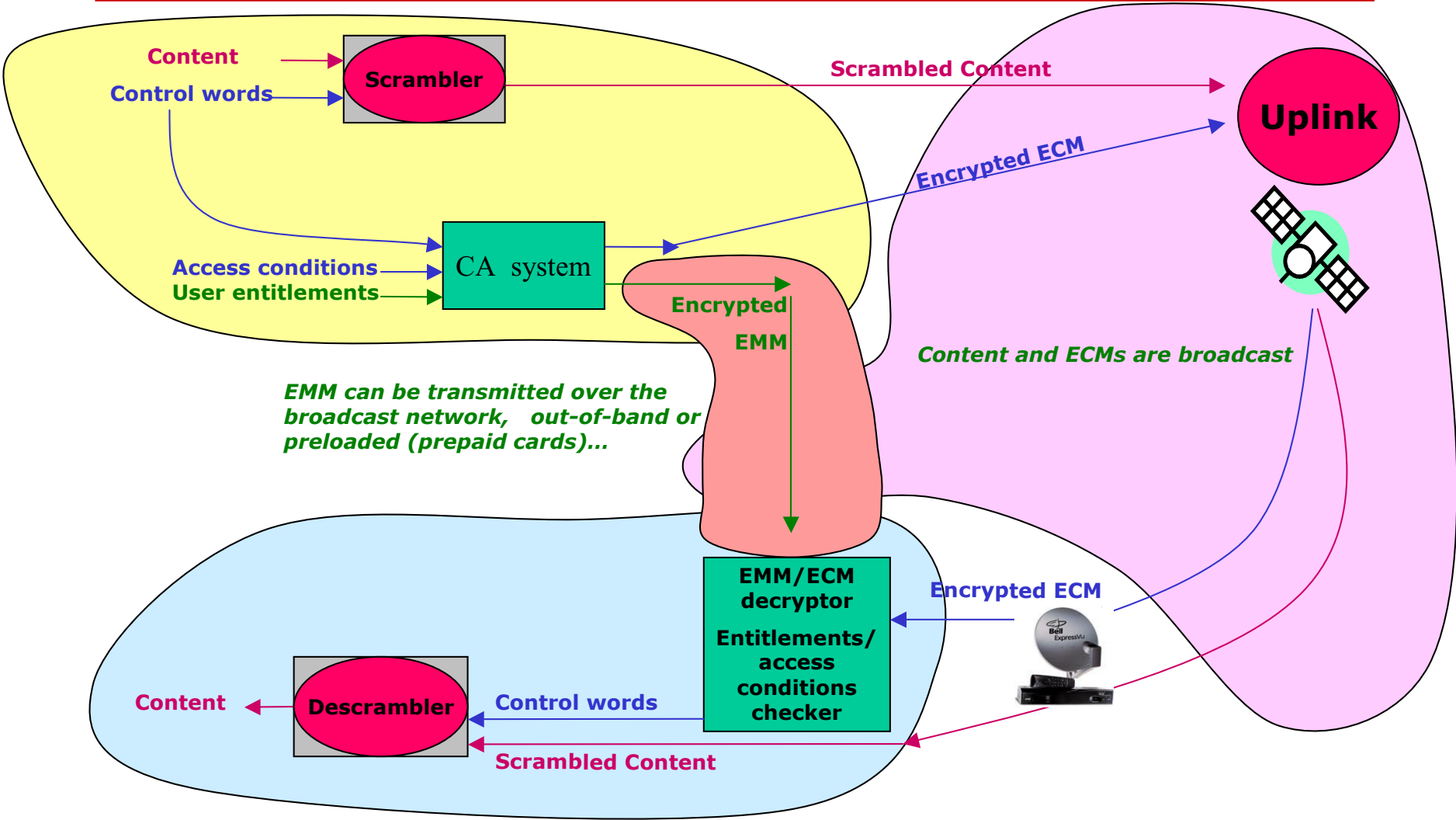
# CA vs DRM – Client-side view



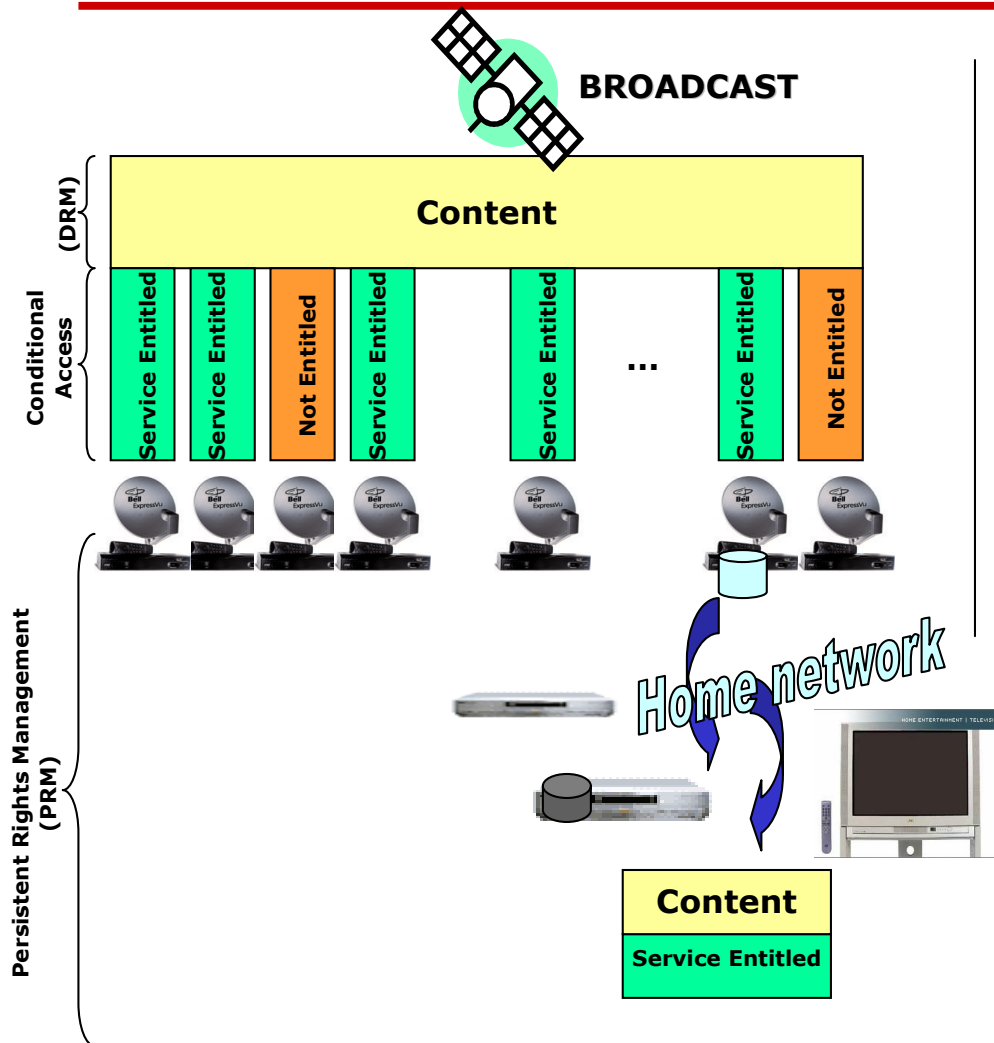
- **CA enables broadcast service protection, beyond content protection**
  - **Access to broadcast content is conditional to subscription or pay-per-view purchase**
  - **Beyond content, rights are associated with:**
    - **A service**
      - ➔ Access conditions to content items packaged under that service (subscription, pay-per-view)
    - **A user**
      - ➔ Entitlement to access a service



# Conditional access overview



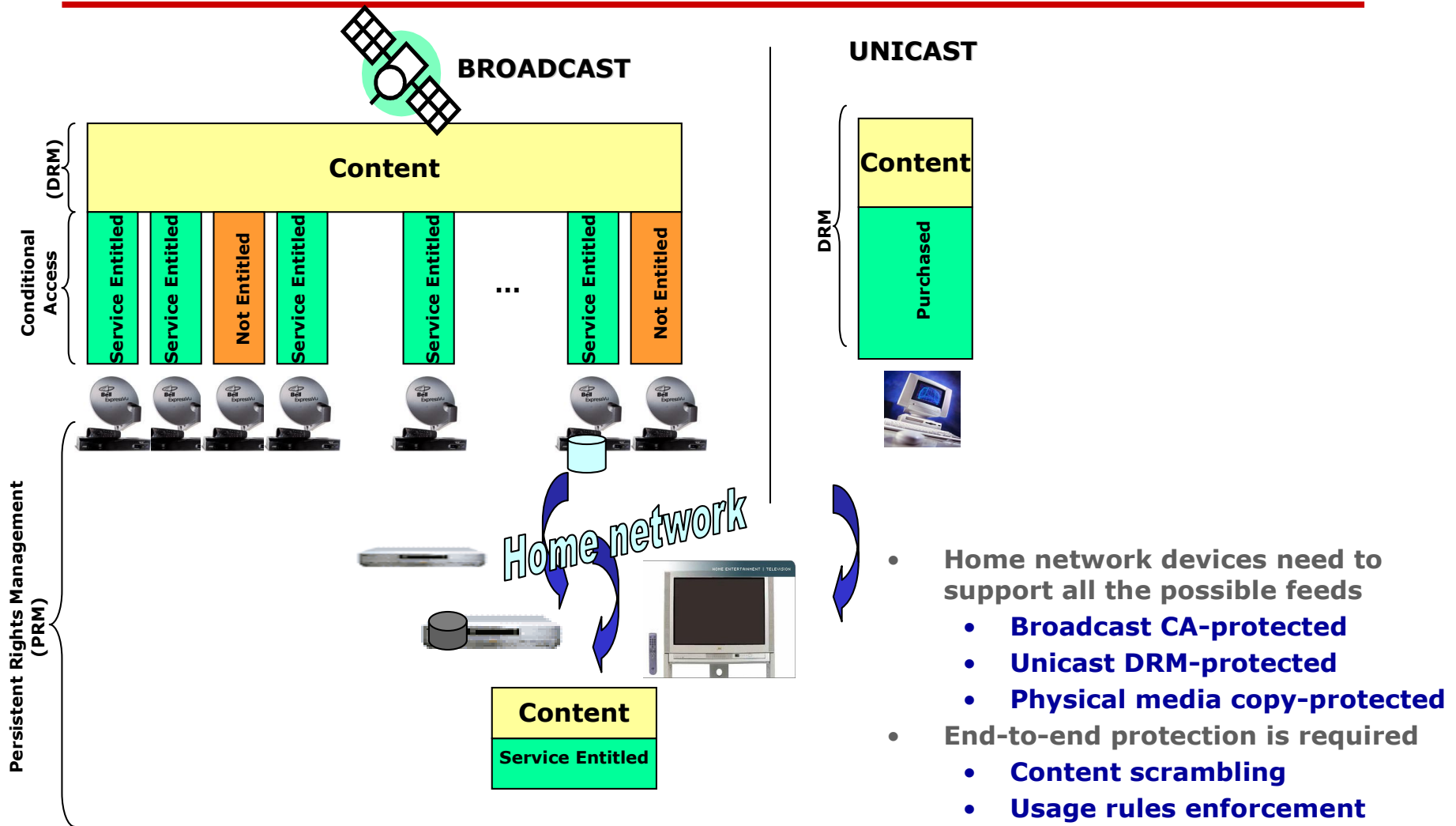
# Persistent Rights Management



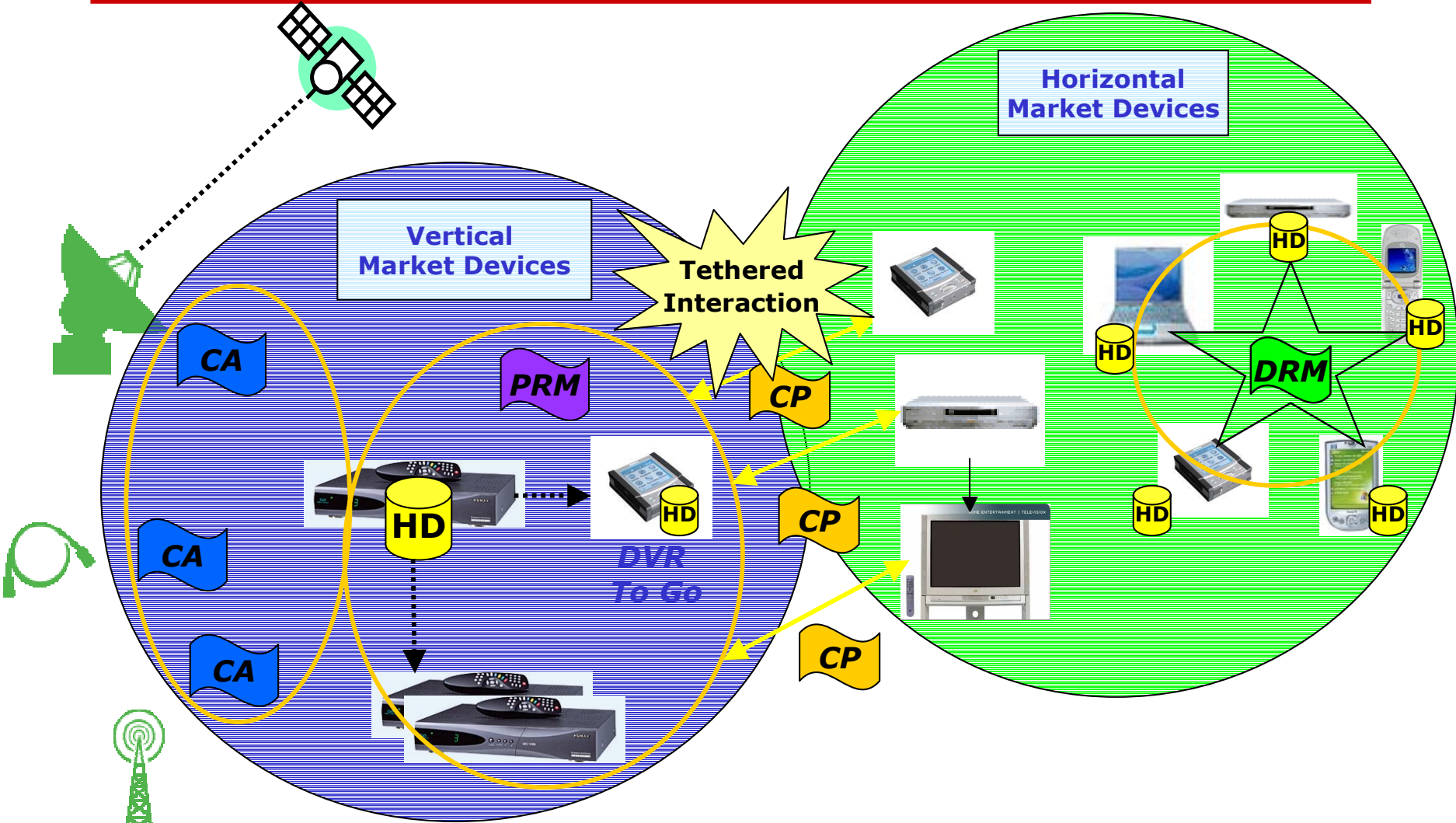
- VOD experience in a broadcast environment
  - Content is pushed to a Digital Video Recorder
  - A commercial transaction, possibly off-line (phone), entitles the DVR owner to rent the content for a given time window (e.g. 24 hours)
  - Can be developed over an existing broadcast infrastructure
  - Requires CA extension to handle time-shifted rights
- VOD experience in a home network
  - Zapper decoders access recorded content from the home DVR acting as a video server, enabling time-shifting experience from multi-room devices
  - Requires enforcement and management of an "authorized home domain" notion
- Remains under broadcaster control



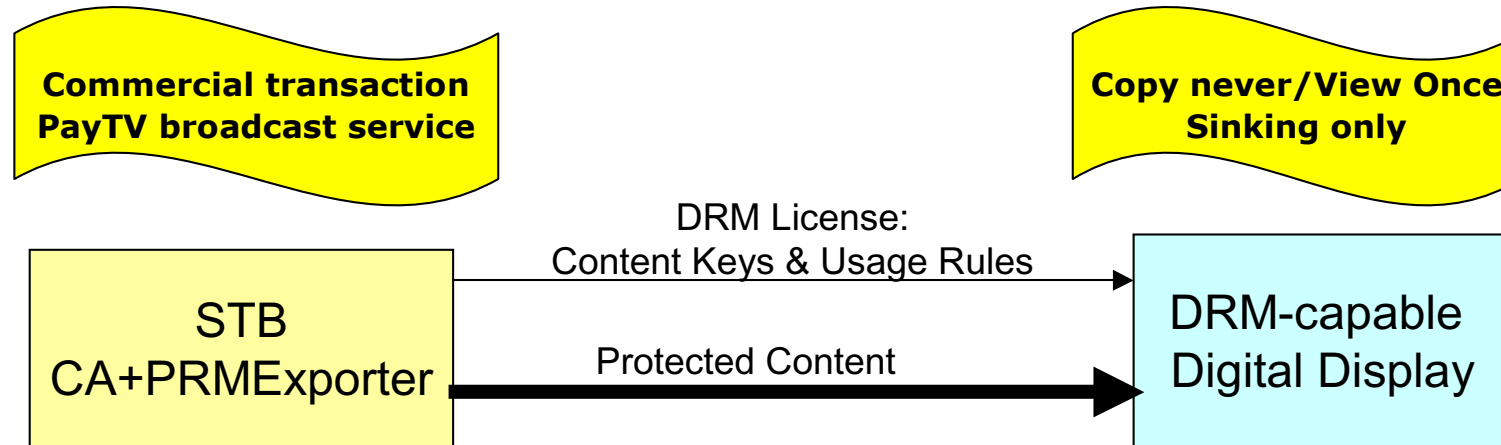
# Need for interoperability



# Broadcast feed to home networking



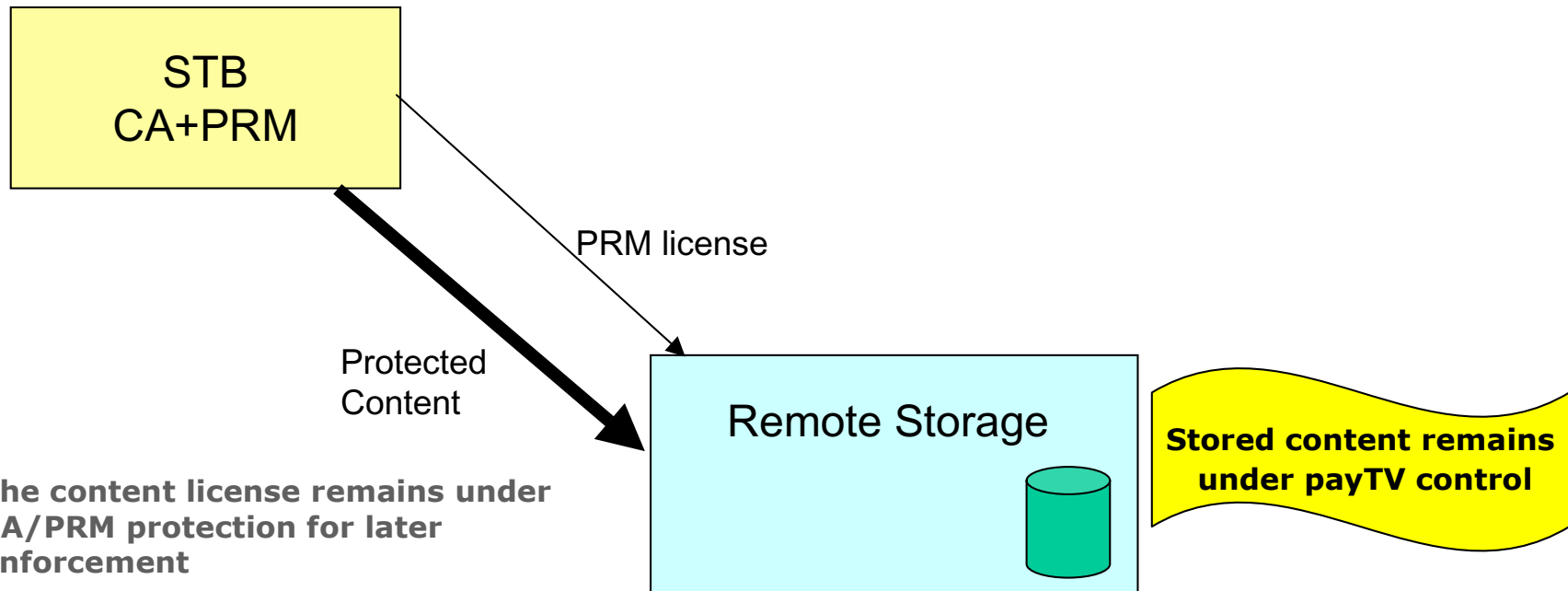
# Live Streaming Use Case



- The PRMExporter shall only operate post-purchase (beyond CA)
- The STB shall authenticate the display
  - **Export payTV content only to "Authorized" displays**
- The STB (PRMExporter) and the DRM-capable device need to agree on
  - **A common content scrambling format**
  - **A secure authenticated channel**
  - **Content keys signaling and synchronization**
  - **Content usage rules signaling (at least Copy Never And View Once)**
  - **Compliance and robustness rules**
- The implementation of the PRMExporter shall not impact the legacy broadcast operation



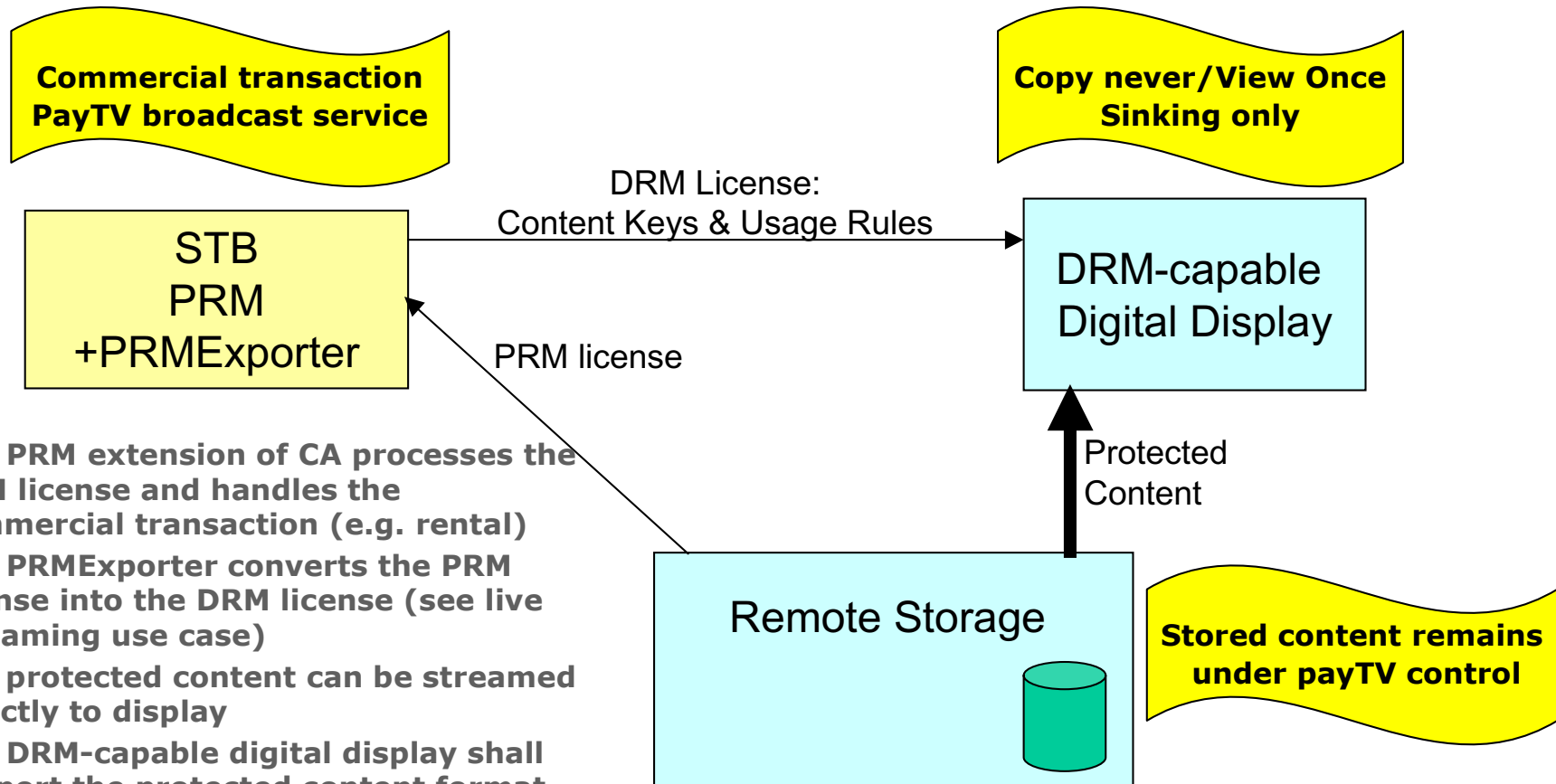
# Tethered Storage Use Case - Record



- The content license remains under CA/PRM protection for later enforcement



# Tethered Storage Use Case - Play



- The PRM extension of CA processes the PRM license and handles the commercial transaction (e.g. rental)
- The PRMExporter converts the PRM license into the DRM license (see live streaming use case)
- The protected content can be streamed directly to display
- The DRM-capable digital display shall support the protected content format (at least the initial broadcast scrambling)
- License and content handling need to be synchronized



