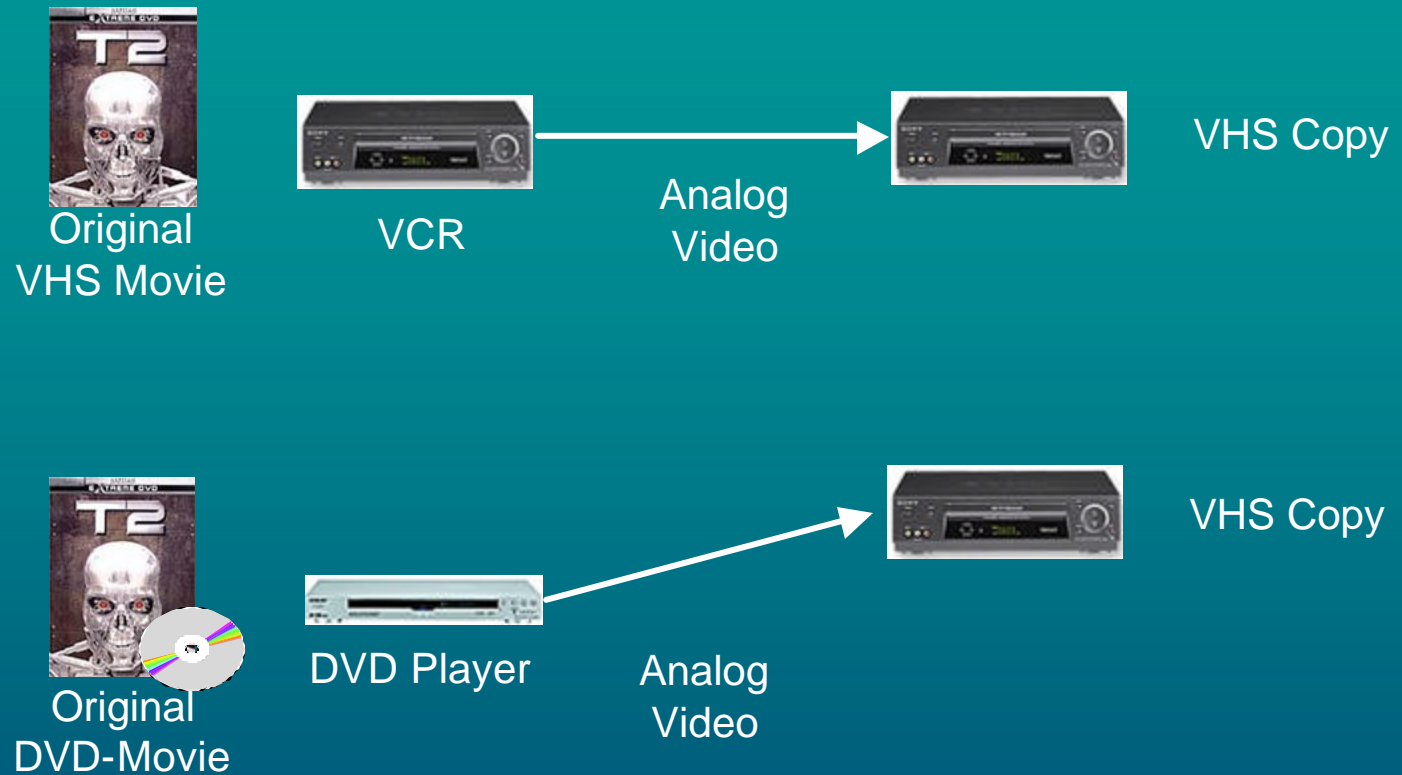


ACP-E™

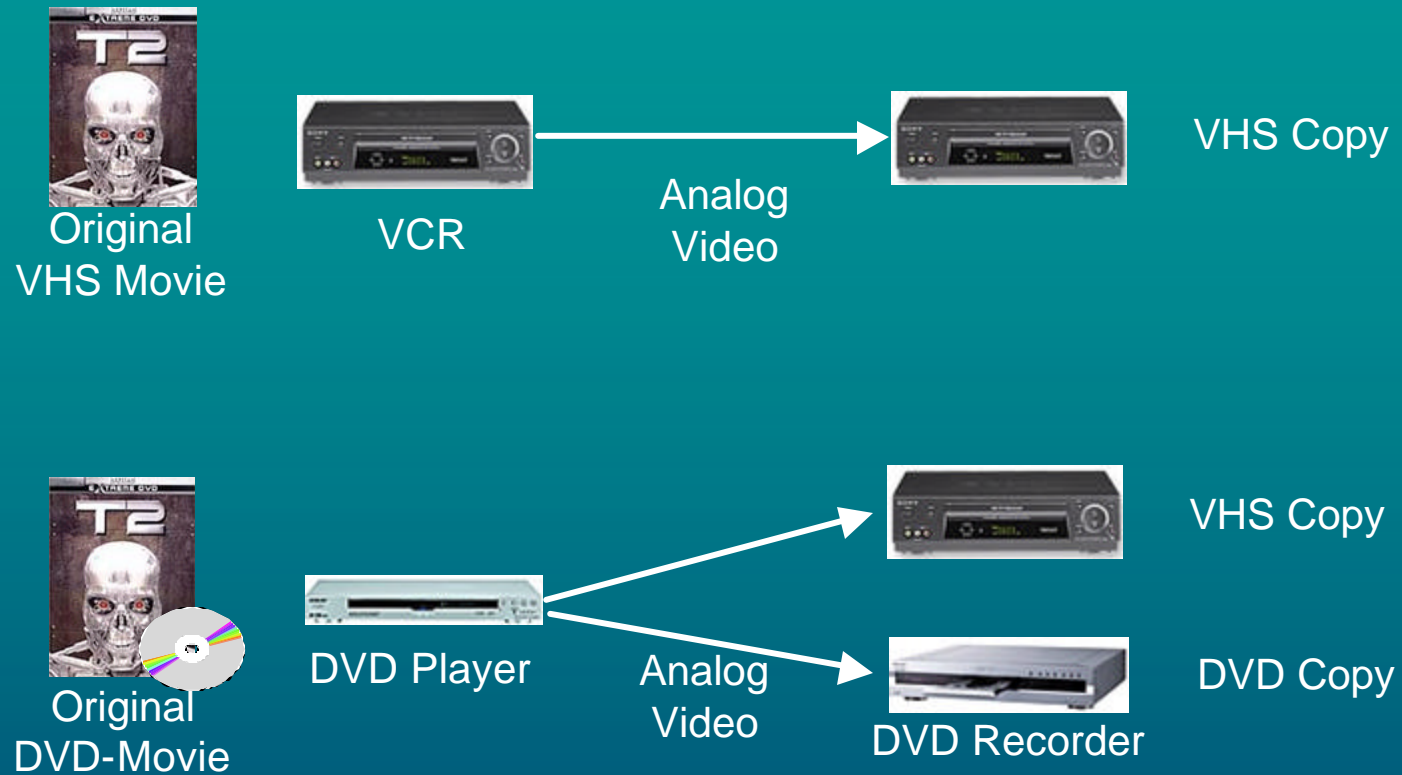
ACP-Extended for Essential Rights  
Conveyance

macrovision

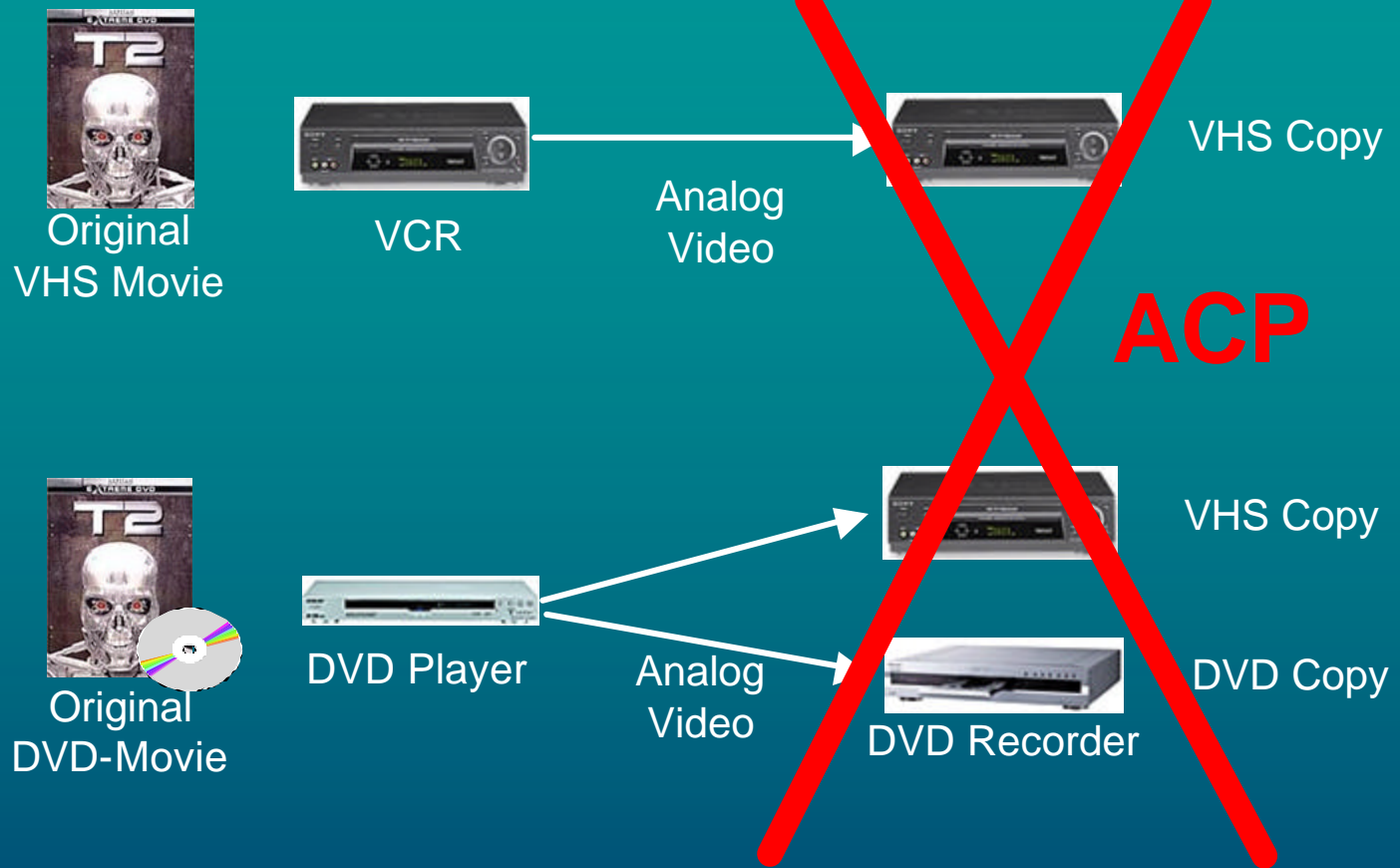
# The Analog Problem is...



# And also...



# And Macrovision's ACP solves it

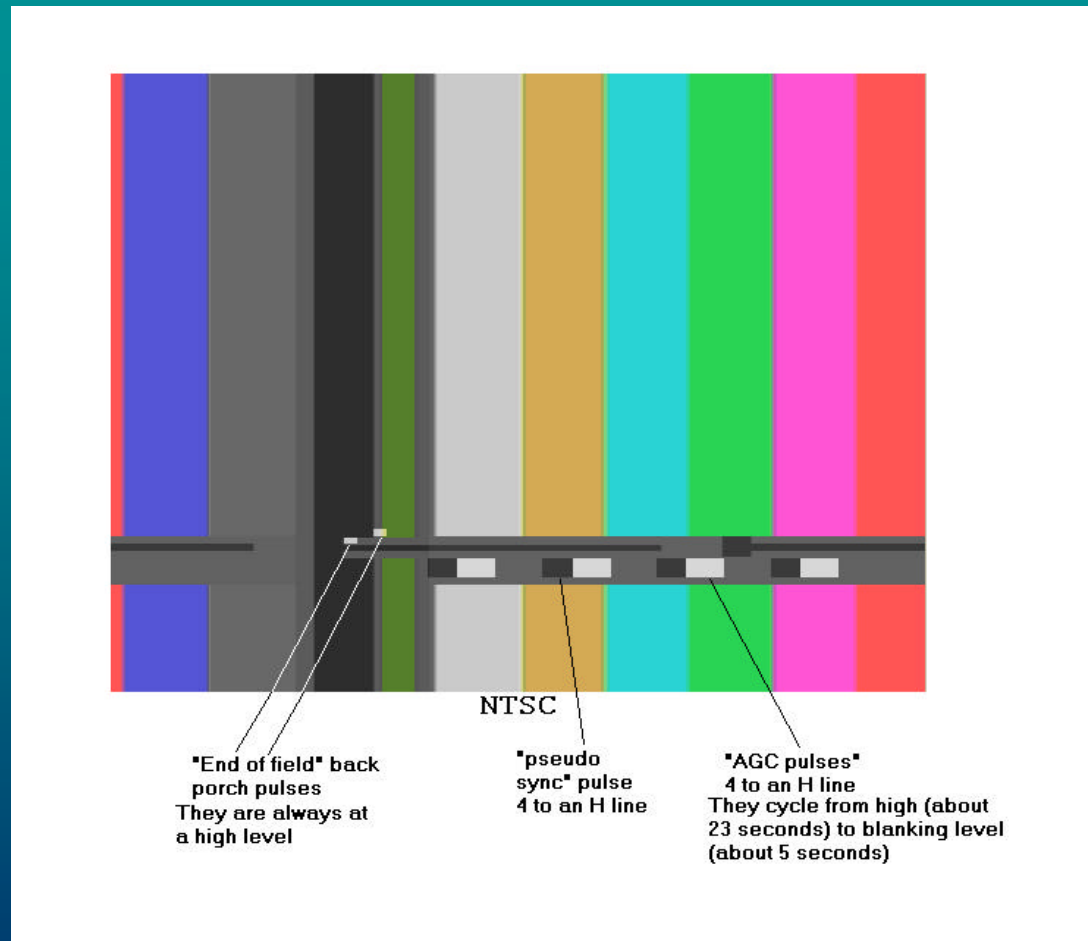


# Historical Macrovision Analog Protection System

- A method of forcing copies to be **degraded or inhibited** when copies are made of video signals containing the Macrovision signals
  - **AGC** (Automatic Gain Control) process
    - automatic gain control pulses, pseudo-sync pulses, back porch pulses
  - **Color Stripe** process
    - **2-line** Color Stripe
    - **4-line** Color Stripe
  - **Currently controlled:**
    - **AGC** [Trigger bits = 1]
    - **AGC + 2-stripe** [Trigger bits = 2]
    - **AGC + 4-stripe** [Trigger bits = 3]

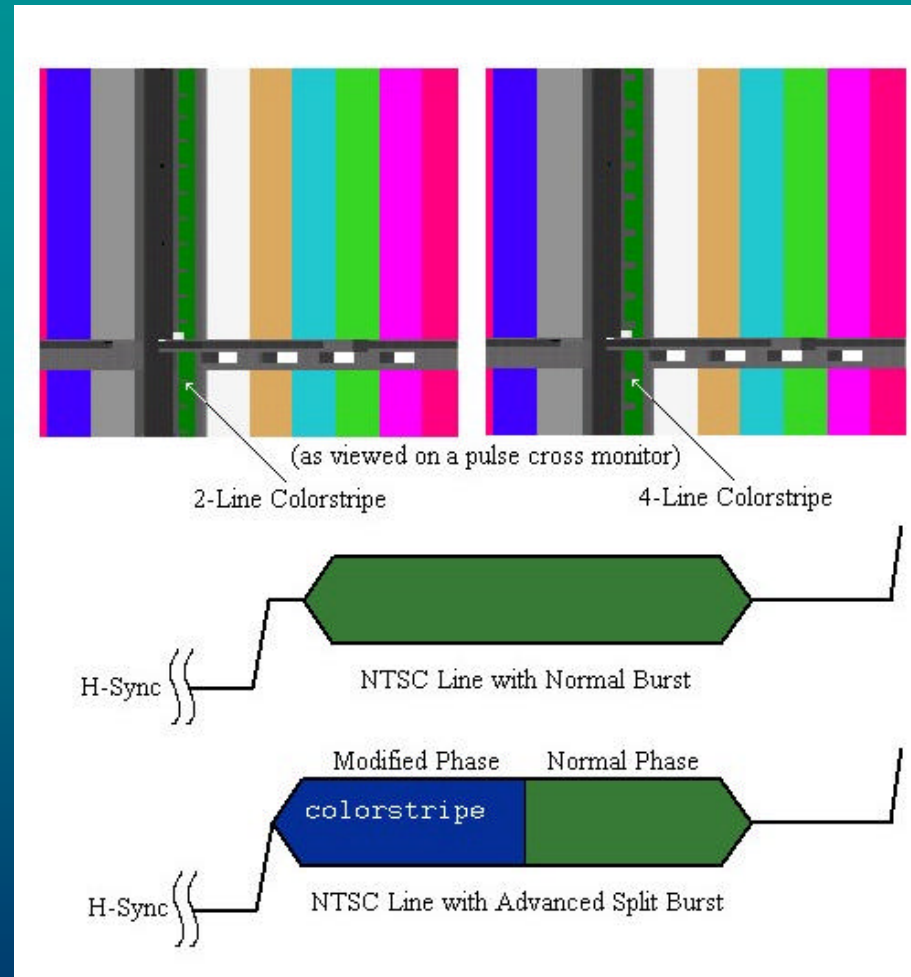
# AGC

- **Pulses** added to vertical blanking interval (VBI) area of analog video signals



# ColorStripe

- Variations in the **horizontal blanking interval**
  - **Color subcarrier** of a composite analog video signal



# APS Settings

APS <sup>1</sup>	“Defined” Processes	“Actual” Processes
0	Off	Off
1	AGC	Pulse Types: Automatic Gain Control (AGC) Pseudo-Sync (PS) on 0-8 lines Back Porch (BP) on 0-12 lines
2	AGC + 2-line ColorStripe	AGC/PS/BP + 2-line ColorStripe
3	AGC + 4-line ColorStripe	AGC/PS/BP + 4-line ColorStripe

<sup>1</sup> – Analog Protection System

# Today's Problem & Solution

## ➤ Problem

- **Original** definition of rights associated with process are limiting for range of applications needing rights in today's environment
  - PVR
  - DVD recorders
  - Home networks

## ➤ Solution

- Use processes to denote **larger** set of rights available for setting by rights owners

# Extensions Can Enable Flexibility



Analog  
Video



PVR or

Home Media Server/PC

AGC + 2-line  
ColorStripe



PPV, VOD,  
Internet  
Streamed



Analog  
Video



PVR or

Home Media Server/PC

ACP-E:

PS/ AGC/ BP + 4-line  
ColorStripe

Such as Pause!

With ACP-E™ = Copy One Generation (90m)

# Proposed Usage States

- Copy Never
  - Storage prohibited to removable and non-removable media
- Copy One Generation
  - Not movable across networks or interfaces
  - Requires cryptographic protection when on media
  - On playback, Copy Never applied to analog video on output
  - (90 minute)
    - Storage permitted to non-removable media
    - Prohibited to removable media
  - (30 days)
    - Storage permitted to non-removable media
    - Prohibited to removable media
    - Must complete viewing within 24 hours of start
  - (No Limitation on Persistence)
    - Storage permitted to removable and non-removable media

# Proposed Usage States (2)

## ➤ Movable

- Requires cryptographic protection when on media or digital interfaces
- No restriction on persistence
- Storage permitted to removable and non-removable media
- Only **one logical copy** exists at a time

## ➤ Copy within Domain

- Or, Control Not Asserted, no Movement outside Authorized Domain (CCNA, no MAD)
  - Requires cryptographic protection when on media or digital interfaces
  - No restriction on persistence
  - Storage permitted to removable and non-removable media
  - **Unlimited logical copies** may exist in an authorized domain

# Why are these Essential?

- Serve the largest population of users of these rights
  - Precedent in time-shifting
- Input Macrovision has received from its base of customers
  - Manufacturers
    - PVR
    - DVD recorder
  - IT companies
    - Home media servers
  - Operators
    - Cable
    - Satellite
    - IP delivered
  - Rights owners

# Next Steps

- **Finalize Usage States**
  - **Consultation with stakeholders**
  - **Define compliance rules**
- **Complete draft specification**
  - **Seek comments**
- **Produce appropriate licenses**

# Contact Information

## ➤ Licensing

- Carol Flaherty
- Senior VP, Sales
- 408-562-8436
- [cflaherty@macrovision.com](mailto:cflaherty@macrovision.com)