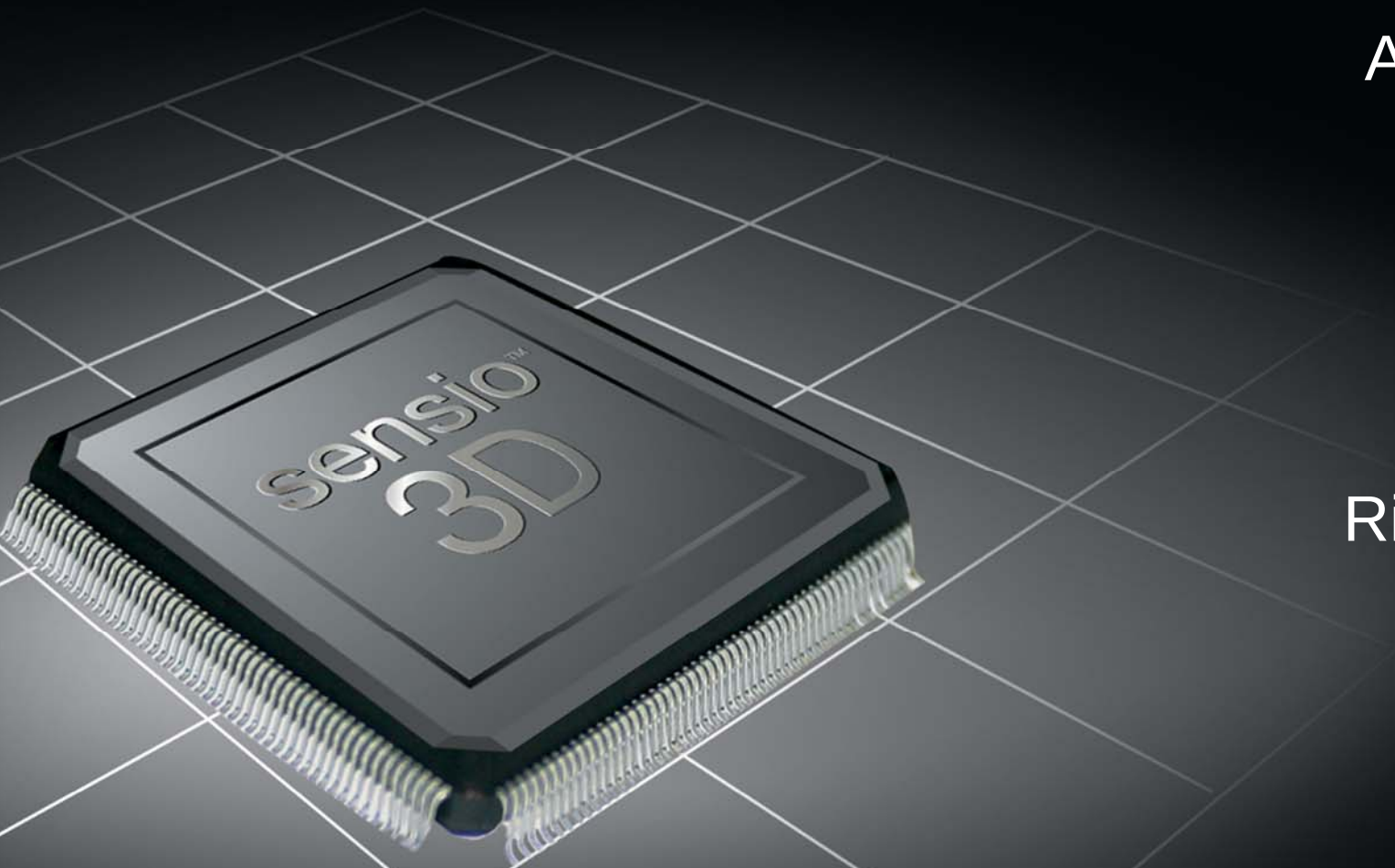
SENSIO TECHNOLOGIES INC
EBU PRESENTATION

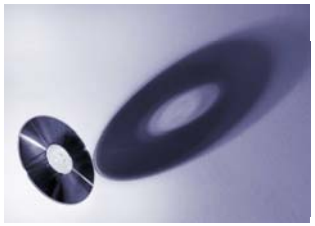
April 30th, 2009



Presented by:
Richard LaBerge

Overview of the Technology

SENSIO®3D
SPATIAL COMPRESSION



3D CONTENT CREATION → **DISTRIBUTION** → **PLAYBACK** → **REGULAR TV OR 3D READY DISPLAY**

SENSIO encoder

Conventional 2D distribution infrastructure

SENSIO decoder

THE SENSIO 3D TECHNOLOGY USES THE 2D DISTRIBUTION INFRASTRUCTURE FOR 3D CONTENT

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“A” ENCODING

1

First pass analysis

2

Frequency based spatial compression

3

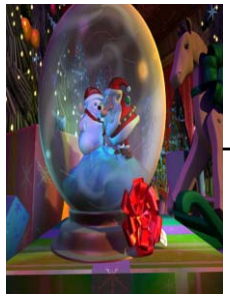
Compressed image

L

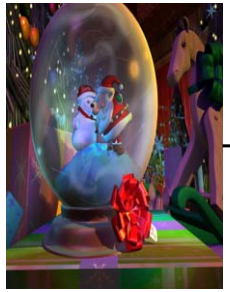
R

2 streams at 1920X1080

L

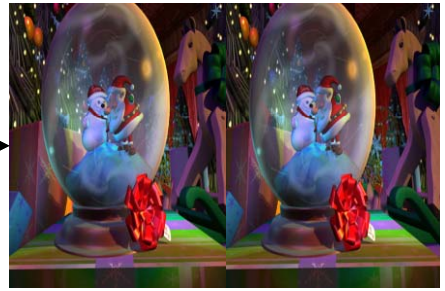


R



2 streams at 960 X1080

L R



1 stream at 1920X1080

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“B” DECODING

1 **Regional frequency detection**

2 **Weighted factor calculation**

3 **Image expansion**

L

R

$F = f(H,V)$

L

R

2 images at 960 X1080

2 images at 1920 X 1080

sensio "C" FORMATTING

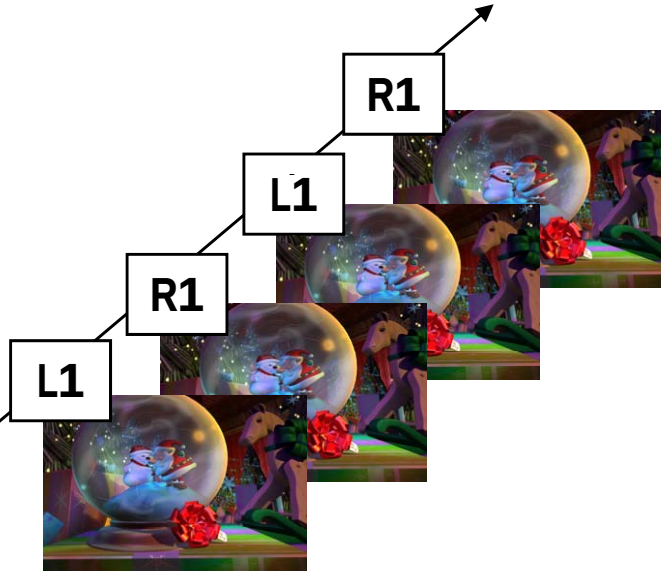
1 **3D output mode selection**

- Column interleave
- Line interleave
- 3D DLP
- Dual stream
- 2D
- Etc.

2 **Selective memory access**

Output memory controller

3 **Filtering and output**



This example:
Page flip at 2X (120Hz)

BENEFITS

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QUALITY

Quality of Image

- Highest quality in the spatial compression format
- High fidelity to the original

Quality of 3D effect

- High fidelity to the effect desired
  (vs depth mapping)

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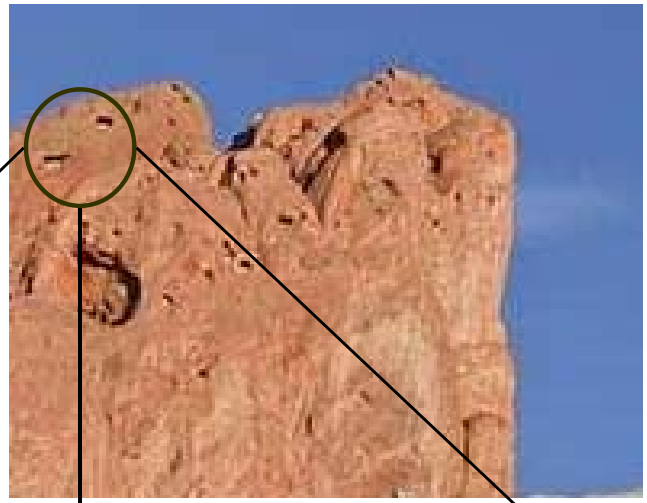
QUALITY



ORIGINAL

SIDE-BY-SIDE

SENSIO® 3D

ABOVE/BELOW

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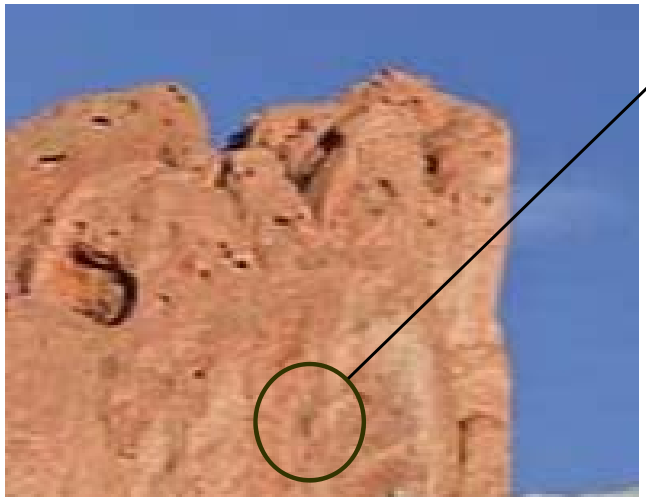
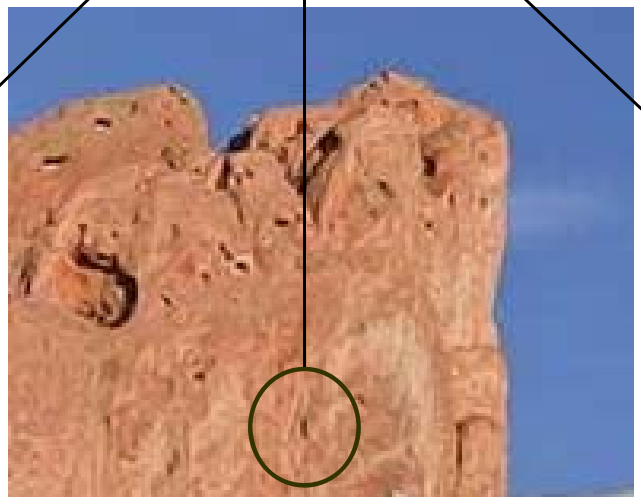
QUALITY

ORIGINAL



SIDE-BY-SIDE



SENSIO® 3D

ABOVE/BELOW

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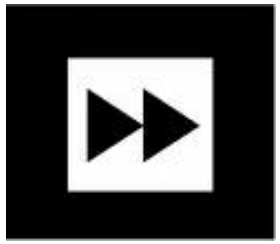
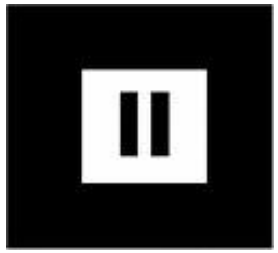
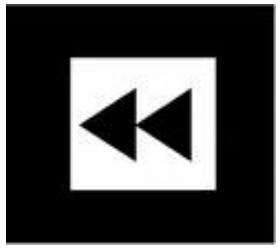
SENSIO is compatible with:

- Legacy players (Blu-Ray, DVD)
- Legacy receivers (VOD, PPV)
- Codecs (MPEG2, MPEG4, VC1)
- All existing and future 3D displays
- Mastering software, hardware, workflow
- Existing user interaction (pause, rewind, FF)
- Subtitles & close captioning







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EFFICIENCY & SIMPLICITY

- No additional bandwidth or storage capacity
- No synchronisation issues
- Minimal hardware requirement (memory processing)
- Minimal processing delay (5 lines)
- Simple to integrate in hardware design

SENSIO IS AN EXTREMELY ROBUST TECHNOLOGY

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EVOLUTIVE

- Improvements on 2D transferred on 3D (4:4:4, 12 bits, higher bit rates, etc.)
- Second generation of SENSIO algorithms coming soon

Future ready !

Broadcast applications Cinema & Home Examples

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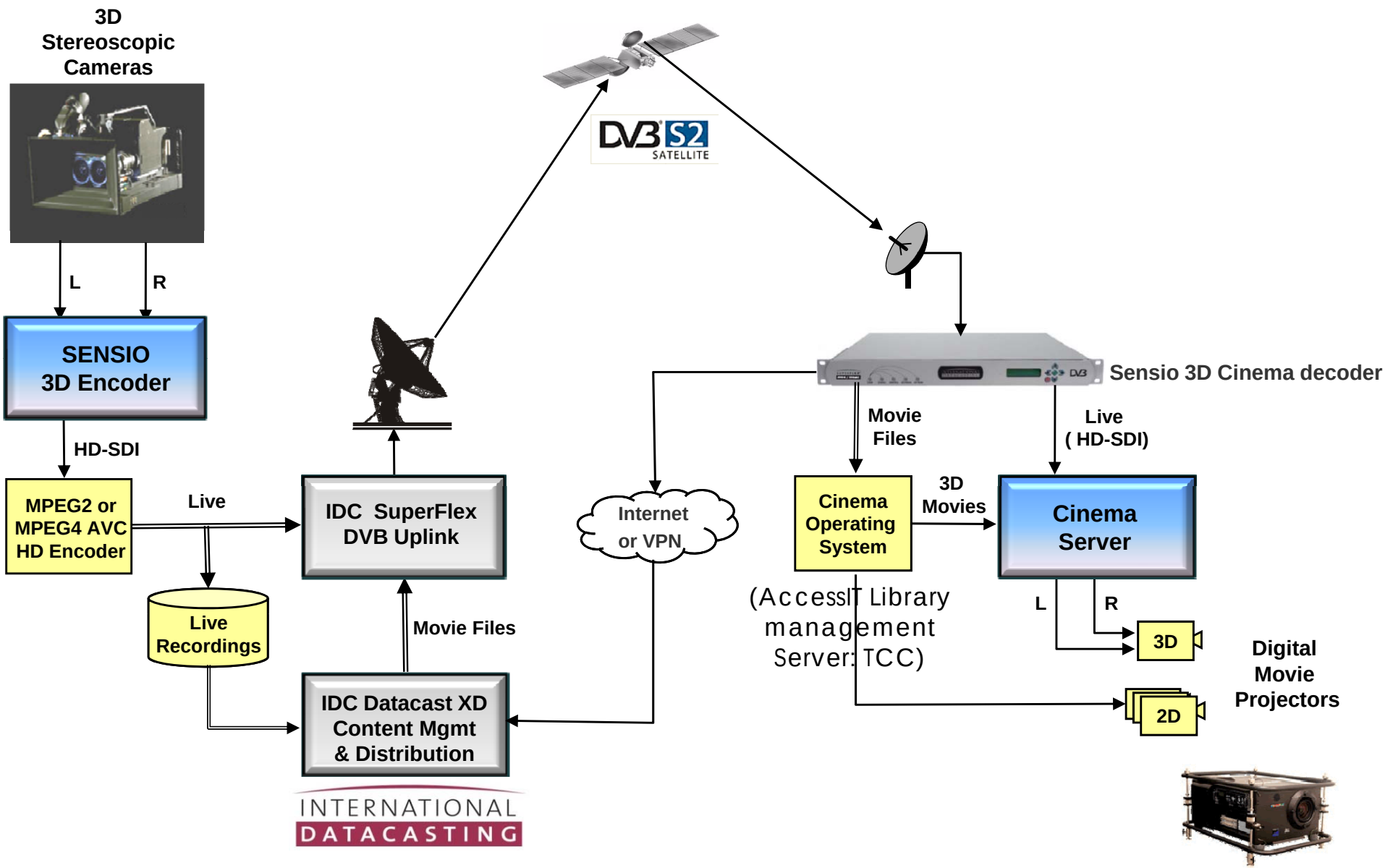
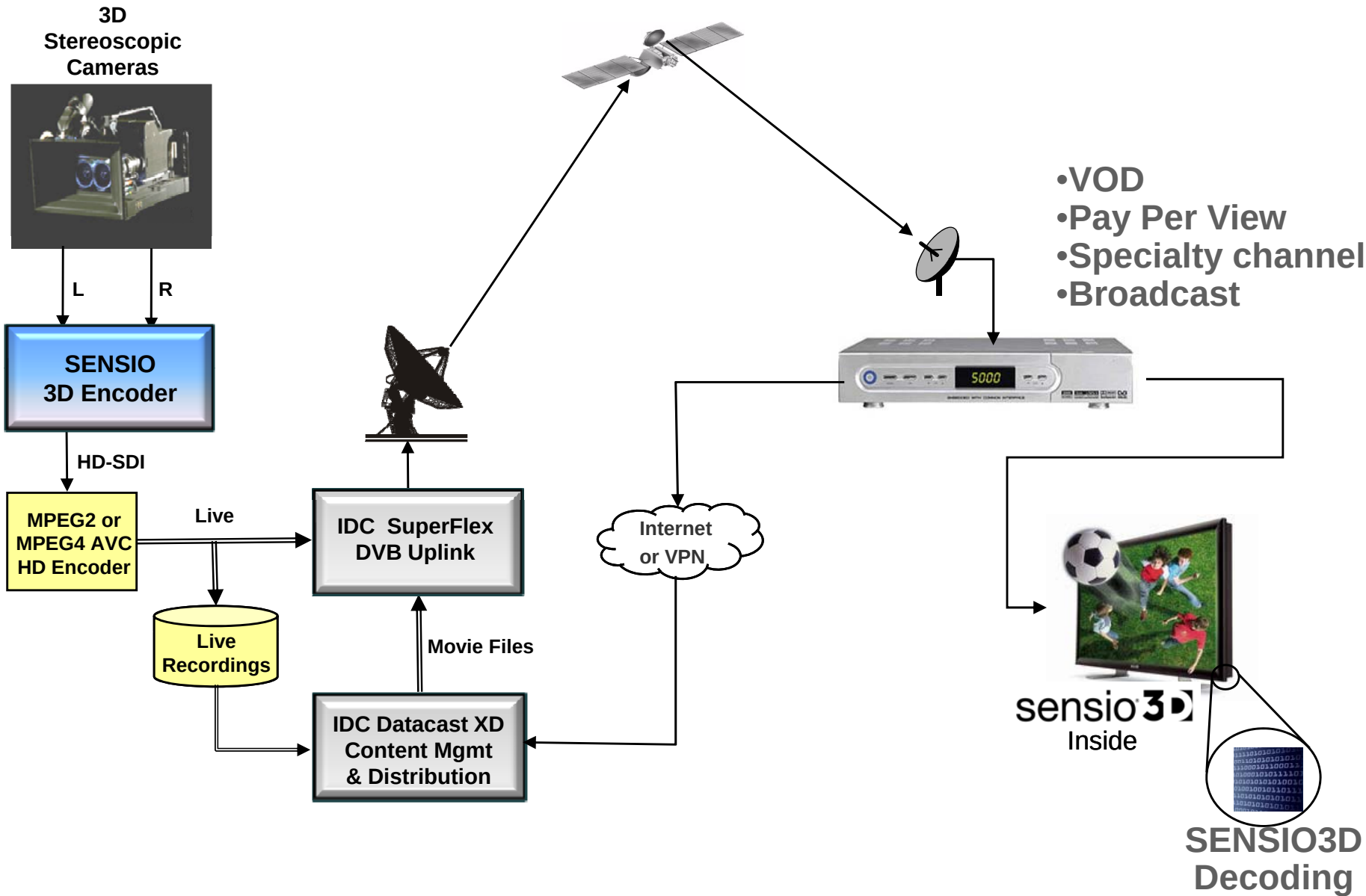
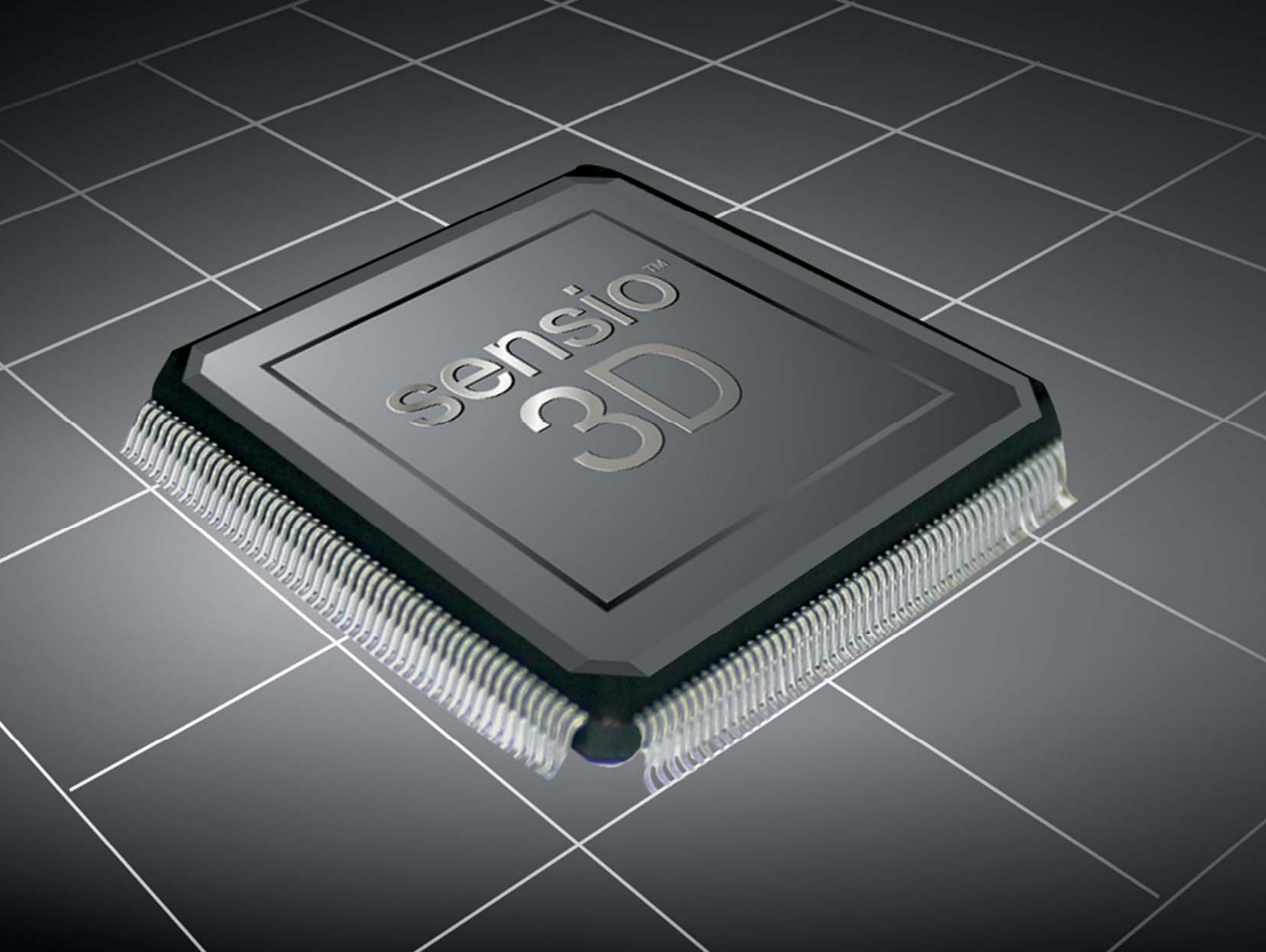
CINEMA DISTRIBUTION



sensio HOME DISTRIBUTION




sensio™
3D