

NDS, STM Pitching Embedded Silicon

BY MATT STUMP -- Multichannel News, 4/5/2004

NDS Group plc is joining forces with STMicroelectronics N.V. to produce a new open-standards video chip that can handle secure content encryption within a hardware platform.

The idea behind Secure Video Processing (SVP) technology is to embed the authorization of content delivery within the chips inside consumer devices — such as set-tops, TVs, digital video recorders and wireless devices — rather than within software.

OUTSIDE THE BOX

For cable, the immediate benefit could be an easier and more cost-effective means of passing highly valued content around a home-network setup, NDS said.

Current copy-protection systems are “pipe-based,” said NDS vice president of business development Carmi Bogot. “Every little pipe has its own protection,” he said.

Those “little pipes” include the various connections between current devices: TV to DVD player, set-top box to TV set or set-top to digital-video recorder, for example.

“That’s very cumbersome and very expensive,” he said. And those “pipe” connections lack plug-and-play functionality and only protect content while it’s in those pipes, he said.

“When it’s in boxes, it’s in the clear,” said Bogot.

EMBEDDING EVERYWHERE

NDS’s goal is to embed as many consumer-electronics devices (set-tops, TVs, DVRs, DVDs, PDAs and mobile devices) as possible with SVP chips, so authorized content can be passed freely between them.

NDS has held discussions with various U.S. cable operators, all seven major Hollywood studios and with News Corp., the majority owner of NDS.

Bogot said cable operators looking at next-generation digital hardware are considering hardware-based content-protection solutions, similar to the SVP approach.

STMicroelectronics is building an SVP chipset. Bogot said. Thomson Consumer Electronics and Cisco Systems

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Inc. are also looking at the technology, he said.

Bogot said ST can take existing chipsets and add a small number of “gates” to create a secure video processor. “Every device that displays digital content has a video processor,” Bogot said.

NDS and STM use the existing logic in the chip and add several “gates” to create a secure video processor at minimal extra cost.

Content remains under control as it is passed from an SVP chip in one device to one in another device.

In situations where an SVP-enabled set-top is sending content to an older TV set without an SVP chipset, the content is transported and rendered on the TV set in analog format.

STANDARD CALLED OPEN

Content is defined using a content segment license, Bogot said. Keys are passed using a baseline entitlement control message.

SVP supports controlled authorized domains, the broadcast flag, device revocation and horizontal distribution, and prevents the illegal redistribution of content.

The current chip design supports standard-definition television in Moving Pictures Expert Group MPEG-2 format, with Dolby audio and Advanced Encryption Standard encryption. Bogot said optional enhancements include MPEG-4, HDTV, MP3 and other encryption formats.

Bogot said NDS would offer the SVP open standard to the applicable standards bodies for approval, ranging from the Federal Communications Commission to Cable Television Laboratories Inc. to several industry working groups.

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