

MAINCONCEPT HEVC/H.265

Customer Success Story

Liberal Logic Inc. and Crescent Inc.www.liberallogic.co.jp | www.crescentinc.co.jp | www.mainconcept.com

Gearing Up for Industry Change: Making the Shift to MainConcept HEVC/H.265

How It all Began

Liberal Logic Inc., an independent software vendor specializing in wideband data transmission technology, recently made the shift to MainConcept SDKs due to an issue in their encoding workflows. Crescent Inc., an engineering organization specializing in interconnected global technologies, is a key partner to Liberal Logic and early adopter of their new software.

Both Liberal Logic and Crescent discovered that they needed a new option to power high-quality video output for large studio builds that was not only usable, but reliable, flexible and cost effective. Having found the solution with the help of the experienced team at MainConcept, both companies invested in a partnership to ensure significant internal development and efficiency. Making this shift allowed Liberal Logic and Crescent to greatly improve their decoding and encoding efficiency and provide global studios with the needed technology for high-quality video production.



Identifying the Problem

With the industry moving so rapidly over the last few years, Liberal Logic and Crescent noticed an increase in demand for both high-quality video and larger studio builds, however, the support infrastructure was not meeting the changing needs. As a result, the companies were finding it near impossible to secure a well-balanced solution on the market. With the two companies specializing in the production of a variety of content across gaming, movie, commercials and music videos, the solution needed to be able to stand high-quality and robust transmission scenarios. An efficient and reliable encoder was needed to be the cornerstone.

Based on their combined experiences, they knew the right encoding solution had to be available. An early attempt backfired when the selected encoder provided incomplete packages that could not be compiled and sample code that was unbuildable. This meant that the solution was unable to provide the continuous integration required for a modern development cycle. Liberal Logic and Crescent had come up against encoders with poorly designed APIs, implementation restrictions and lowered usability prior to working with MainConcept's SDKs.

Navigating Industry Disruption: What Were the Challenges?

As with any focus area, the broadcast and media industry has its challenges. Over the past few years, the market has seen an increase in the complexity of kit that is needed at a typical production shoot. Not only this, but vendors and organizations are progressively

seeing a lack of specialist equipment that is robust enough to deal with the higher demand for quality and speed.

The robustness of professional video/audio equipment interfaces, such as SDI, provides high added value to customers in the sense that video, audio and time code can be accurately recorded without missing a single frame.

Optimizing Operations with MainConcept HEVC/H.265

Liberal Logic's SyncV, the software solution embraced by Crescent for this new project, requires robust, high-quality encoded material to be input that must be matched naturally by the encoder.

The latest version of SyncV is the first product from Liberal Logic to use the MainConcept HEVC/H.265 Encoder SDK in a system with SDI as the video input interface, enabling it to encode four channel SDI with embedded audio in real-time for storage in mp4. A particularly unique feature of this system is the independent operation of channels, meaning that four video channels can be recorded in entirely different video formats. This makes the solution capable of working with either asynchronous or synchronous systems, leading to a much more flexible system design.

With the implementation of a house sync and timecode generator in the recording system and inputting it into the SyncV system, external recording signals can be received from Vicon SHOGUN (the motion capture system) or the volumetric video system 4D Views HOLOSYS for automatic recording. As a result, Liberal Logic and Crescent have achieved a "+0 frame recording error" with respect to the IN and OUT points of the timecode when using automatic recording in conjunction with an external system. The recording function that allowed this to happen was deeply reliant on the excellent design and implementation of the MainConcept HEVC/H.265 Encoder SDK.

“Coming from such a bitter experience with our encoding solutions, it has been a breath of fresh air to partner with MainConcept and implement their HEVC/H.265 SDK. The significant development we have experienced across the entire workflow is astounding, and it makes me excited for the prospect of the future with SyncV taking such a central role in our operations. The simple design, crisp API implementation and overall flexibility and efficiency of MainConcept's encoders perfectly marries with the expectations of our robust and high-quality software.” – **Shinichiro Nakamura, CEO at Liberal Logic Inc.**

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SyncV is equipped with a content management system preloaded with an extensive library of recorded content and a unique timecode burning function using SIMD calculation functions required for shooting on site. Another benefit of implementing the MainConcept HEVC/H.265 Encoder SDK is that the cameras used now incorporate a plethora of additional functions. The SyncV SDI is a single package environment that incorporates various factors required for high-quality video production, made possible by MainConcept's encoders which are simply designed, implemented and delivered in a ready to use form for easy application.

By utilizing the MainConcept HEVC/H.265 Encoder SDK, Liberal Logic and Crescent have realized a substantial improvement and complete shift in operations with a modular design and excellent API functionality, emphasizing reusability and resulting in a variety of usages company wide. HEVC has a flexible cross platform design implementation which also determines the scalability of the application product to the platform. By implementing MainConcept codecs, Liberal Logic and Crescent are more platform compatible, resulting in a significant increase in adaptability.

Looking to the Future: Emerging Technologies and Trends

The industry is at an inflection point, necessitating the need to address new challenges. Such challenges consist of not only SDI implementation for new use cases, but also various IP transmissions involving the support for the ever-evolving world of mobile devices. The future is full of new and exciting pathways for production, whether it be video, gaming, music or broadcast. By evolving their work-

flows now, Liberal Logic and Crescent are allowing for a smoother transition and development into new territories, leading the way for many other vendors using MainConcept SDKs.



“Our mission to provide new video and gaming production venues is now much brighter with the implementation of the MainConcept HEVC/H.265 SDK. Able to seamlessly adapt to robust, high-demand and professional quality transmission scenarios, MainConcept’s encoders have given us the opportunity to expand wider and embrace the waves of change within the industry as well as the evolution of SDI interfaces and IP transmissions. We are extremely thankful to the MainConcept team for their incredible work and support with this project..”

– Hajime Kotani, President at Crescent Inc.

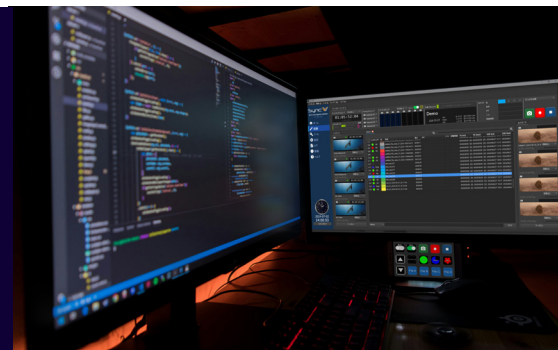
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Both Liberal Logic and Crescent aim to transition and adapt to a new, more modern generation than ever before. Crescent is building a new studio in Tokyo to lead the transition into a new era of video, gaming and audio production. The studio will be a place where many of the latest technologies can blossom, becoming a ‘dream toy box’ for engineers in the industry. It will be designed around a giant LED display, one of the largest in the Asian region, offering a variety of functions required for a state-of-the-art studio. This new studio, Crescent’s largest in Asia, will help lead the region into a new age, providing new venues and opportunities for production.

“We are pleased to have restored Liberal Logic’s faith in software encoders and that the MainConcept HEVC/H.265 SDK is more than capable of meeting the expectations for the development of their re-engineered SyncVV software. As implemented by Liberal Logic and Crescent in their state-of-the-art Tokyo studio, the new facility is geared to meet the demands of today’s productions while the software is flexible enough to adapt to whatever the future holds.”

– Masashi Nemoto, Senior Director, Sales at MainConcept

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About MainConcept

Since 1993, MainConcept has provided best-of-breed video/audio codec solutions that fuel creativity and business globally for professional video production, multimedia, broadcast, digital signage, gaming, medical and security industries. Our software development kits, transcoding applications and plugins are used across industry verticals to meet an ever-expanding list of use cases. With world-class engineering, exquisite attention to detail, and best-in-class support and professional services, we are constantly innovating to deliver you the simplicity you need with the customer experience you deserve. MainConcept codecs are engineered to surpass the challenges of even the most demanding use cases and are used by organizations such as Adobe, AVID, Autodesk, Corel, Dalet, Endeavor Streaming, Globo, Grass Valley, Intel, MAGIX, Nikon, Sony, Telestream, V-Nova and Wowza. MainConcept is a subsidiary of Endeavor, a global sports and entertainment company.