

## **INCJ to invest in Trigence Semiconductor K.K. Company offers world's first enabling technology for fully digital speakers**

**Tokyo, February 12, 2014**—Innovation Network Corporation of Japan (“INCJ”) announced today its decision to invest in Trigence Semiconductor K.K. (“Trigence”), a company engaged in the manufacture and sale of semiconductors that implement unique digital-processing technology that makes fully digital speakers possible. The investment will provide Trigence with a maximum of ¥480 million in growth capital required to further accelerate business development. Existing shareholder Intel Capital (Intel’s investment division) will also invest.

Traditional audio systems use a converter to convert source sound from digital recordings such as CDs into analogue waves. The analogue waves are then used to power a speaker coil. This process requires audio systems to be fitted with conversion and amplification devices, which has hindered big breakthroughs in space and energy saving, and made it difficult for manufacturers to differentiate their products in areas other than sound quality.

Within this environment, Trigence has developed Dnote<sup>®</sup>, the world’s first digital modulation technology that makes it possible to power speaker coils with a digital signal. With Dnote<sup>®</sup>, it is possible to directly power a speaker without converting digital sound to analogue. Because this eliminates the need for analogue converters and amplifiers in audio systems, the technology greatly reduces energy consumption and contributes significantly to space saving.

Mobile devices such as smartphones and tablets are increasingly being used for playing music and video, and the market for wireless speakers and headphones for these devices is rapidly growing. The energy and space-saving features of Trigence’s technology offer advantages for miniaturization and battery life extension in mobile devices. The advantages are not limited to smartphones and tablets, but also make significant differentiation possible in speakers and headphones. Similarly, there are high expectations for Dnote<sup>®</sup> as a leading solution in the market for in-vehicle audio equipment, where EV/HEV conversion is also carried out and where energy and space saving would be a significant differentiator.

Furthermore, because the technology allows the output of digital sound without conversion to analogue, the sound reproduction retains its high quality. Dnote<sup>®</sup> also offers promise as an optimal solution for high resolution (high sound quality) music streaming services, which have seen growth in recent years. Several audio and in-vehicle audio manufacturers and semiconductor manufacturers have already adopted Dnote<sup>®</sup> or have begun to consider its adoption.

To date, Trigence has focused on research and development with support from the Japan Science and Technology Agency, Intel Capital, and others. INCJ will provide Trigence with the necessary funding to develop new semiconductors that allow further miniaturization and greater power output,

and to strengthen its management structure ahead of international expansion. At the same time it will also provide managerial support such as appointing external directors and strengthening business development.

Through this investment, INCJ is providing support for the global expansion of a low energy consumption, high-quality audio platform developed in Japan.

#### **About Trigence Semiconductor K.K.**

Established: February 2006

Overview: Design and sales of semiconductors for acoustics, using Dnote<sup>®</sup>, a unique digital-processing technology

Location of Headquarters: 4-13-5 Sotokanda, Chiyoda-ku, Tokyo 101-0021, Japan

U.S. subsidiary: Trigence Semiconductor USA (Silicon Valley)

Representative Director: Jun-ichi Okamura

Website: [www.trigence.co.jp](http://www.trigence.co.jp)

#### **About Intel Capital**

Intel Capital, Intel's global investment and M&A organization, makes equity investments in innovative technology start-ups and companies worldwide. Intel Capital invests in a broad range of companies offering hardware, software, and services targeting enterprise, mobility, consumer Internet, digital media and semiconductor manufacturing. Since 1991, Intel Capital has invested more than US\$11 billion in over 1,339 companies in 54 countries. In that timeframe, 206 portfolio companies have gone public on various exchanges around the world and 344 were acquired or participated in a merger. In 2013, Intel Capital invested US\$333 million in 146 investments with approximately 49 percent of funds invested outside North America. For more information on Intel Capital and its differentiated advantages, visit [www.intelcapital.com](http://www.intelcapital.com) or follow @Intelcapital.

#### **About Innovation Network Corporation of Japan (INCJ)**

INCJ was established in July 2009 as a public-private partnership that provides financial, technological and management support for next-generation businesses. INCJ specifically supports those projects that combine technologies and varied expertise across industries and materialize open innovation. INCJ has the capacity to invest up to ¥2 trillion (approx US\$20 billion).

To date, INCJ has invested approximately ¥700 billion in a total of 60 projects and is currently focused on a broad range of areas from green energy, electronics, IT and biotechnology to infrastructure-related sectors such as water supply. INCJ maintains a hands-on approach to investment, engaging in the business development of cutting-edge core technologies through intellectual property funds, expansion of venture companies and aggressive overseas development through initiatives such as restructuring and mergers of tech businesses and acquisitions of foreign companies.

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\* Dnote is trademarks of Trigen Semiconductor in the United States, Japan and other countries.

# Appendix

## INCJ to invest in Trigence Semiconductor K.K.

### Company offers world's first enabling technology for fully digital speakers

Target: Trigence Semiconductor K.K.  
 Outline: Development and sale of Dnote® series of semiconductors for acoustics, using unique digital-processing technology  
 Investment: ¥480 million (maximum)



- Support global expansion of low-power-consumption, high-quality acoustics originating in Japan
- Support development of new markets in the acoustics field through full digitization

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