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I am very pleased to write this message in this special issue of “Hitachi Hyoron,” on the occasion of the 100th year anniversary of Hitachi Research. Hitachi Research has been a leader in computing research for decades as well as one of Stanford’s oldest and most valued industrial partners, so I am especially honored to be writing here.

If I think back, it has been an amazing 100 years, for Hitachi and for the world. In this relatively short period of time, we have gone from a fully analog society to a digital one. We have gone from oil-based power generation to nuclear, wind, solar and hydro generation. We have developed a myriad of exciting new materials that make our world more productive and safe. Health care has significantly improved the quality and length of our lives. Human beings have walked on the moon and our probes have visited the solar system. We have gone from an information scarce society to an information abundant society.

Hitachi Research has played important roles in all these transformations, and its collaboration with Stanford has been a key ingredient in our successes. Of course, Hitachi Research has collaborated with many universities and research organizations, and likewise, Stanford has collaborated with many partners over the years. The Hitachi-Stanford partnership, however, is an excellent example of how an industrial organization can broaden its horizons by supporting university long-term basic research and can discover new emerging ideas. Similarly, a university like Stanford benefits by learning about real-world problems, and by having talented researchers visit and contribute to specific projects. As a matter of fact, this type of industry-university collaboration has been part of the “secret-sauce” that has driven Stanford to success, both by educating and training students and by generating disruptive start-ups that change the world.

Hitachi has supported Stanford faculty and students in so many different ways that it is impossible to describe them all. But just to illustrate, here are just a few of the interactions that come to mind. The earliest one that I know of is a collaboration in the early 1980’s between the School of Medicine and the Hitachi Research Laboratory. In the 1990’s Hitachi was a partner of our Stanford Digital Library

Project. This project is best known for the development of sophisticated Web search engine technology and the initial deployment of the Google search engine. Incidentally, Sergey Brin was a student working on this project and did a summer internship at the Hitachi lab in Silicon Valley. He then went on to found Google, together with Larry Page, another student working on the Stanford Digital Library Project.

In 1988 Hitachi funded the Hitachi America Professorship in Engineering, an endowed chair held by several distinguished faculty in the past 30 years, beginning with Professor Thomas Kailath, one of the founders of modern information theory and a winner of the National Medal of Science. More recently, Hitachi became a Founding member of our Stanford Data Science Initiative. This initiative is exploring ways in which data collection and analysis can drive discoveries in diverse fields such as medicine, social science, and engineering. Hitachi in particular, has brought real-world insight in diverse fields such as financial services, use of unstructured data, semiconductor manufacturing, and the industrial Internet of Things. Another way that Hitachi has supported technology innovators is through its sponsorship of the IEEE Technical Field Award for Innovations in Societal Infrastructure, which selected Stanford Professor Balaji Prabhakar as the inaugural recipient.

With all these exciting developments over the past 100 years, one can only wonder what the world will be like in 100 years. It is impossible to predict, but I am confident that with Hitachi’s continued involvement in research and development, the world will be a safer and better place for all of us!

John L. Hennessy is recognized worldwide for his seminal contributions to computer architecture and visionary leadership in higher education. As Stanford University’s 10th president, Hennessy transformed the university by his emphasis on interdisciplinary teaching and research, expanding programs related to the environment, energy, and human health to address global concerns, as well as advocating entrepreneurship and university-industry collaboration for the rapid delivery of beneficial technology to the public. His contributions to engineering, education and the public have been recognized with numerous awards including the 2012 IEEE Medal of Honor and 2013 Queen Elizabeth Prize for Engineering.