Introduction to the 2006 IEEE Systems Packaging Japan Workshop

1. History

The IEEE Systems Packaging Japan Workshop will be held next year, from Jan. 30 to Feb. 1, in Hakone. This workshop has a distinguished history. It is held every two years in Europe and in Japan, alternately. It is organized as an informal and focused gathering where photographs and recordings are prohibited with neither manuscripts nor minutes of proceedings published. Participants are mostly engineers directly involved in development activities that come from research institutes, universities and corporations that represent the world's electric, electronic and communications industries. The presentations made during the workshop- are chosen to be interactive and frank with active questions from the audience.

This workshop was originally established as the IEEE Japan Computer Packaging Workshop held in Oiso in 1986. It was inaugurated as the first international extension of the U.S.A's IEEE Computer Packaging Workshop, which started in 1976, with participants from telephone switching and large-scale computer manufacturing companies. At the time they were developing the most-advanced device and packaging technology.

In the mid-'70s, Mr. Watanabe, then Head Manager of the NTT Atsugi Office, and Mr. Kanai, then Executive Director of NEC, participated in the U.S. workshop and worked as the originators of the Japan workshop. These two gentlemen initiated a call for participation. Eight companies responded: NTT, NEC, Hitachi, Fujitsu, Mitsubishi, Oki, Toshiba and IBM-Japan. In 2000, this organization was renamed The Systems Packaging Japan Workshop and it became a colloquium where system packaging technology of not only computers but also system packaging technology for all types of electronic products were discussed emphasizing on-package design from the system perspective.

Figure   Committee Members at The 1st Computer Packaging Japan Workshop

A snapshot of "The 1st Computer Packaging Japan Workshop" held on January 27–30, 1986 at Oiso Prince Hotel. Participants commented that they were excited by this new trend where, in those days a typical announcement made in the US was "Impact of an LSI on System Packaging" (the 4th workshop in 1980). The third person from the right is Mr. Makoto Watanabe then Head Manager of NTT Atsugi Office, who acted as the General Chair. 36 participated from the US and Europe, and 43 participated from Japan.

	Year	Venue
1st	1986	Oiso town, Kanagawa
2nd	1988	Oiso town, Kanagawa
3rd	1990	Oiso town, Kanagawa
4th	1992	Oiso town, Kanagawa
5th	1994	Tsukuba city, Ibaragi
6th	1996	Tsukuba city, Ibaragi
7th	1998	Tsukuba city, Ibaragi
8th	2000	Hikone city, Shiga
9th	2002	Mitaka city, Tokyo
10th	2004	Hakone town, Kanagawa
11th	**2006**	**Hakone town, Kanagawa**

Table   List of Places for each Workshop

General Outline of the Workshop

Since photographs and recordings are prohibited, the presenters have the ability to introduce the most advanced technologies that are incorporated into new products using pictures and diagrams. The most advanced technologies were typically shown at these workshops. For instance, packaging technologies such as C4 (controlled-collapse-chip-connection), multi-chip modules, ceramic modules, multilayer printed circuit boards, fine-pitch interconnection technology and high-speed signal transmission technology were included. In addition, mechanical technologies such as air/water-cooling technology, power supply distribution, and noise management were also typical topics. This attracted a large number of people to attend the Japan workshops where presenters were proud of their presentations and listeners were excited to hear them.

In presentations, the expectation is that the material will go beyond simply introducing basic technology. For example, a major discussion could be about which technology choices should be adopted and what are their trade-offs at the system-level with the goals being to optimize either high performance or low cost or both.

Usually, all attendees at a workshop, whether as the presenters or the questioners, bring home a sense of learning new things by meeting their peers from other companies that have the same challenges in developing advanced and, sometimes, competitive products. This knowledge discovery goes beyond the bounds of organizations - enabling participants to engage in lively conversations leading to friendships with engineers form other companies.

In addition, the locations for having discussions are not limited to the presentation meeting room. During the three-days, most dinners and social hours are hosted by the workshop for people to meet and enjoy each other's company. In addition, there are off-site tours that will be provided for learning and personal interactions. Many opportunities will occur for each participant to continue their engineering discussions and to become personally acquainted with their peers. Please feel free to make the most of these three-days of learning and enjoyment. It will be an experience you will never regret.