

## Plextek

### Presentation of Plextek

Plextek is a 20 year old award-winning consultancy company. Its main activities are design services (DSP Design, FPGA, Microwave, RF, software and systems), and strategic consulting. The success of the company has been built upon its technological expertise, recognized in a number of domains, and gained in advance of the market. Plextek Ltd is still fully owned by the 3 founders and the staff. While the consultancy business is based on customers' requests, Plextek Ltd started developing its own Intellectual Property (IP) portfolio 4 years ago.

### Involvement in standardization

Plextek built its reputation upon its early expertise in technologies. While the company develops proprietary solutions to fulfil customer requests, standards also play a key role. By being involved in early stages of standards development, Plextek has gained an expertise which is valued by its customers.

Plextek is particularly involved in the following standards activities:

- **ETSI:** Plextek is a full member and is able to represent clients' interests at ETSI meetings.
- **Bluetooth SIG:** There are now over 2000 members of the Bluetooth Special Interest Group (SIG). Plextek was one of the first 20 adopters, joining the group in 1998.
- **IEEE:** due to its geographical location, Plextek is less involved in IEEE working groups and mostly participates through its voting right.

When the company was started, the most important standard for Plextek was probably CT2 (first digital cordless phone), handled by a CEPT group. Plextek followed the transition to the DECT standard in ETSI which represented a sizeable part of Plextek's activity between the years 1990-2000. DECT was central to the company but Plextek was largely a follower of the standardization process as it came late into it (the standard was already quite stable). This late involvement in DECT probably diminished their potential revenues but fortunately DECT was a very big market which contributed to the development of the company.

When the DECT market matured (2000-2005), with falling prices, the developing GSM market became a major part of the business of Plextek. While GSM and UMTS have been large businesses, Plextek did not get much involved in their standardization, but hired experts who had been heavily involved in the standards in their former occupations.

The involvement of Plextek in the Bluetooth SIG in the early adopters group has been a successful story. Plextek believed that Bluetooth would succeed as there was a requirement for short range wireless technologies. Bluetooth was believed to be close to the core competencies of the company and to be manageable, without being a massive undertaking. It was a strategic decision of the company to get involved. The return on investment came quickly because the standard was manageable and knowing it was a clear competitive advantage.

Plextek also participated in standardization committees which in the end turned out to be less successful for the company. For example, Plextek was involved for years in developing proprietary solutions for Broadband Wireless Access (BWA), when the company decided to get involved in the

HyperMAN activity in ETSI BRAN (Broadband Radio Access Networks), as it was felt that the market might go toward standardized solutions. Unfortunately, accelerating ADSL deployments meant BWA failed to be accepted in the market.

As a consultancy company, Plextek has to respond directly to the demands of its clients. It is continuously questioning its involvement in forthcoming standardization activities, and chooses to get involved in two scenarios.

- Involvement in standardization may be on behalf of a customer which does not have the technical capability or is geographically too remote,
- Involvement may be in response to an evaluation of the market, and the capabilities of the company – choosing to get involved in cases where there are opportunities and clear benefits in terms of knowledge and competence to be gained from being involved.

## Key lessons from Plextek

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Altogether, the involvement of Plextek in standardization has been significant. When looking at Plextek's business strategies we should look at the development of a technology over time and the potential for revenue for the company based on this technology.

Three steps are identified in the technology development:

- Step 1: the technology is not yet matured or represents a niche market with proprietary solutions. No standards are defined
- Step 2: as the number of actors considering the technology increase, the technology gets standardized.
- Step 3: the standard is mature and the market develops as expected or unexpectedly fails.

Thus two variables can be identified. The first is to do with the way the market develops: *developing* vs *not developing* and the second is to do with the stage at which the company becomes involved with the technology: *early* vs *late*. We can use the Plextek experience to identify three scenarios:

- **Bluetooth case:** ideal case where the company has the technology, has developed its expertise, has identified its niche market, and has invested in the standardization. Participation in standardization clearly contributed to the company success in Bluetooth.
- **DECT case:** case where the company came late to the technology but the market was large enough to generate enough revenues, even if the revenues may have been higher had it participated sooner and took a leading role. Participation in standardization did not play a role in the company success, as it largely followed the existing standards.
- **BWA case:** the market vanished while the standardization was on-going. The company was already involved in the technology and participation in the standardization effort was wasted.

In summary participating in the standardization process appears to have been a success enabler for the company when it goes in conjunction with the company's expertise and the development of the market.