DS2

DS2 History

DS2 (Diseño de Sistemas en Silicio S.A), founded in 1998, developed chipsets for power line networking. The company grew rapidly, especially since 2004 when DS2 launched a chipset capable of transmitting data at 200 Mbps, and which made DS2 a world leader in the power line chipset market, with a total of approximately 130 employees in 5 offices around the world (Valencia, San Diego, Taiwan, Japan and Korea).

A particularity with this company was the importance given to standardization in its strategy: since the creation of its business plan, DS2 knew that it had not only to follow but also to drive the standardization process if it wanted to grow and compete in the worldwide market.

DS2 was a leading contributor to the ITU-T G.9960 standard and to IEEE P1901, and participated in the Universal Powerline Association (UPA). In addition, the company supplied the chair to the ETSI TC PLT committee on Power Line Telecommunications since 2004.

Standardization and strategy

In order to impose its technology on the world market, DS2 embarked on an aggressive strategy of standardization in all geographical areas. DS2 needed to ensure interoperability for consumers all over the world. The company participated actively in a number of international standardization committees: the American CEA, the Japanese ARIB, the European PLC Platform, CENELEC, CEN and ETSI. Their aim was to standardize their technology, to set the standard and be the technology of choice in power line communications worldwide.

The question for DS2 was not *if* they needed to participate in standardization, but *when* should they start. The founders of the company knew from the beginning that the technology needed to be standardized if the market for power-line communications was to grow, and that they needed to drive the development of standards in order that their company grows with the market. The choice of standardization was a business and marketing choice for DS2, motivated by the hope of increasing sales. The real return on the investment in standardization was the growth of sales.

➢ *The path chosen: proactive and broad geographical coverage*

DS2 chose a strategy for the standardization that could be considered as “offensive” which demanded a lot of effort in terms of time, human resources and finance.

DS2 decided to involve itself in all geographical areas: in particular in Europe, USA and Japan. DS2 wanted to sell everywhere, so it was very risky for DS2 to concentrate on standardization in only one geographical area and worldwide standards don’t exist in this field. For example DS2 was involved in the Japanese standards body ARIB – Association of Radio Industries and Businesses, in the United States in the CEA – Consumer Electronics Association, and Europe in CEN/CENELEC and in ETSI. This strategic choice caused problems for an SME of DS2's size: it was very time consuming and expensive.

- **DS2 decided to participate in both national and international standards bodies and in industrial associations**. In addition to the regional or national SDOs from different countries, DS2 was involved in industrial associations, such as Universal Powerline Association or

Homeplug Powerline Alliance, and in global standardization organizations such as International Telecommunication Union (ITU), or International Electrotechnical Commission (IEC). Participation in industrial alliances had a double objective: develop a standard, but also create an eco-system to support the standard (lobbying). Industrial alliances such as these allow an SME to benefit from a branding and marketing power much greater than it could achieve alone, and to which it contributes relatively little.

- **DS2 decided to be proactive in standards organizations**, in contributing to the development of standards. For example DS2 was one of the leading contributors to the G.9960 standard, was a member of P1901 since its inception and was one of the most active contributors to the effort, and also held the Chairmanship of the ETSI PLT Technical Committee for 6 years.

  This chairmanship position was very strategic for DS2 because it enabled it to have a management position (agenda, timing…) giving it an advantage in the standards process. Indeed the chairman has a very strong influence in the technical discussion: he can sway discussions during committee meetings, people respect him, and he can lobby for his technology. The difficulty lies in the neutral position he has to respect, to drive the standardization process not only in the way his company wants but also keeping the entire technical community behind him.

Key lessons from DS2

Based on their experience, DS2 identified three conditions for return on investment in standardization for an SME.

- **Be a technology company with innovative technology**: one condition of success is the high value of your technology. "*If you are just a little innovative, don't go into standardization*". Therefore participating in standards creation is not for every company, but only for those with "*new and better technology*" and the ambition to impose this technology on the market. A challenge for an SME is to influence the standards process to impose its technology, and therefore gain a market power: that is often only possible for an SME in technological niches.
- **Develop innovation and standardization quickly and in parallel**. A difficulty for SMEs compared to larger companies is the time needed to create standards for consumer-level compatibility. A big player can introduce innovative technology which is not compatible with existing products on the market, because it has sufficient market power to impose its new technology in the market first, and then follow in standards afterwards. An SME selling in a consumer market must provide compatible products for consumers, therefore it must develop its technology in standards beforehand. There is a balance between the need to develop sales, to stay alive, and the need to develop standards in order to introduce its technology. However, in order to develop sales it must have standards-compliant and compatible products for consumers.
- **Have a critical mass to assume the cost** (travel, time and human resources) **of the standardization process.** The cost of standardization must be integrated in the company's business plan, and the standardization process must be treated just as any other business process.