

# The Silicon Intellectual Property Industry

H.-P. Metzler

NewLogic Technologies AG, A-6890 Lustenau

In the mid 1990s a new breed of companies emerged: commercial semiconductor intellectual property providers. These SIP firms focus on the development of IP; instead of taking it to production in the form of a complete IC design, they license their technology to IDMs, ASIC vendors, fabless semiconductor manufacturers and to the semiconductor groups of system OEMs who in turn integrate the licensed IP cores into their IC designs. IP companies do not sell chips – they provide technology that will be embedded in their customer's IC designs, hence the term "chipless" company.

The SIP business model can be seen as an extension to the fabless model and to the silicon foundry business model. Silicon foundries enabled fabless companies to capitalize on their design and system expertise without having to invest in a manufacturing facility. Now, the IP companies capitalize on their IC design and system know-how without having to go all the way to IC production.

Commercial intellectual property is the latest phase of the vertical disintegration process of the semiconductor industry. Independent IP providers now challenge one of the last remaining core competencies of semiconductor vendors, the creation of IP and IC designs. Enabled by the availability of third part IP and IC design services, a semiconductor company can be reduced theoretically to a marketing and sales department supported by a logistics group that handles all outsourcing partners.