

The MIDAS Touch

SINGAPORE'S INTEGRATED CIRCUIT DESIGN INDUSTRY WELCOMES ITS FIRST INDUSTRY PANEL.

"Singapore has the advantage of housing all the players in the microelectronics ecosystem... An organisation like MIDAS will make sure that Singapore's microelectronics industry will make the best use of this advantage, by fostering an active collaboration between the various entities in the industry."

– Ulf Schneider,
President, MIDAS

Local integrated circuit (IC) and system design players can now look forward to a platform where they can network and address industry needs.

Over 20 local and locally based IC and system design players announced the formation of the Microelectronics IC Design and System Association (MIDAS) in January this year, to provide a "unified voice" for the industry and develop pertinent solutions collectively, particularly in the areas of manpower, market requirements, technology and infrastructure.

MIDAS was initiated by the Institute of Microelectronics (IME), a research agency under Singapore's Agency for Science, Technology and Research. It is said that significant interest was shown immediately by all relevant companies and entities, thus enabling the association to take shape within a short time.

"We are glad the IC design industry has taken up IME's suggestion to form MIDAS," says Dr Rajinder Singh, who heads the integrated

circuits and systems laboratory at IME, and will serve as vice president of MIDAS. "We believe the industry should take the lead to improve [its conditions] and IME will support it proactively – by addressing all the issues concerned, proposing solutions and assisting in implementation as well."

It's an exciting step for the country's thriving IC design industry, which has consistently kept pace with the rapid growth of the overall semiconductor industry. In fact, revenue from fabless IC design grew at least two per cent more than the overall semiconductor growth in 2003 and 2004.

HOME GROWN EXPERTISE

Already, MIDAS is eager to work its magic on the local IC design scene; for starters, it plans to organise and participate in events, seminars and round-table discussions to encourage "best-practice sharing" and collaborations within the industry. Furthermore, it intends to build dedicated communication channels for the industry, so that information can be efficiently shared through such mediums as the Internet.

With the local industry flourishing, the question of talent development has also come into play. A beefed up pool of local IC design talent could be key to attracting more global players to the city-state; having locally designed IC chips could also create spin-off business opportunities for the related semiconductor sectors of wafer fabrication and assembly and testing.

According to MIDAS president Ulf Schneider, who is also vice president of Infineon Technologies Asia Pacific's Singapore development centre, the association's immediate goal is "to combine the forces of different contributors – such as universities, training providers, company members and Singapore Economic Development Board (EDB) – to ensure that the [manpower] demand for Singapore's industry growth plans can be met in the short, mid and long term."

"Although Singapore's semiconductor industry employs about 38,000 staff, the number of IC designers is probably less than 900," explains Dr Singh. "Divide this number by the different areas of IC design and one would realise how small the talent pool is." However, the awareness of the issue and the strong desire to improve the situation is expected to bring about a change.

As such, MIDAS will have to spend much of its time nurturing the local talent pool and developing manpower. Possible activities include implementing tertiary scholarships, organising IC design competitions, developing an IC design training institute and introducing an industry conversion programme for non-IC engineers who are considering a switch to IC design work.

MIDAS's talent boosting efforts will be backed by EDB, which is planning to provide or sponsor about 150 scholarships over the next three years to train IC designers for the industry. These scholarships will


be available at the undergraduate and post-graduate levels.

THE NEXT STEP

Apart from having the required human resources, anticipating market developments and consumer trends will help ensure the success of the local IC design industry.

A noteworthy trend in the industry, says Schneider, is that of "convergence," and he expects this to take place on four levels. The first is a "convergence of industry," which is driven by the collaboration of companies and entities in the industry through partnerships, alliances, mergers and acquisitions. This will likely be followed by a "global convergence," because entities spread over different countries and continents must work together to cover global markets. Then there is the convergence of applications, resulting from the seamless integration of such applications as computers and storage devices. Last is the convergence of implementation technologies in areas like design and architecture.

In response to these developments, MIDAS has identified its next target – to attract more system design companies in Singapore to come on board. This, says Schneider, will allow MIDAS to keep abreast of market requirements and technological advancements, making it "an even more comprehensive force" in propelling the industry to greater heights.

"It is important for Singapore to be aware of its unique strengths and exploit them for the growth that it deserves in the IC and system design areas," adds Dr Singh. "We believe our joint efforts will lead to a substantial change in Singapore's positioning in these areas, where design service companies in Singapore can advance to the next phase of handling product designs for greater returns and value addition." 

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