

Accent Collaborative e-Design Services

The Challenge of SOC designs

Today the challenges represented by typical SOC designs are summarized in two dynamics: tight deadlines to achieve shorter and shorter time-to-market and larger design teams required to handle the increasing complexity of IPs selection, integration and validation. To achieve these objectives a greater design efficiency and overall “*design throughput*” is required. One common strategy for the SOC producer to pursue these objectives is to partner with Design Services houses capable to stand besides the design team and speed up the design cycle.

Accent has recognized that this approach is not sufficient to guarantee the management business objectives are achieved. A new level of collaboration and a completely new design process has to be put in place. Based on several years of experience matured on real and complex SOC designs, Accent offers to its customers different levels of collaborative e-design approaches all aimed at improving the sharing of information and data among Accent designers and Accent’s customer designers.

Basically the enabling technologies Accent can provide to its customers during a joint development SOC design are:

- Synchronicity DesignSync data manager to share design information at file level
- Synchronicity IPGear data manager to share design information at design module level; an integrated support system allows to share notes, on-line debates and design decisions that are usually dispersed in the day-by-day work
- Sun Forum technology to share a workstation desktop among several designers across the Intranet enabling real-time concurrent design forums on design specs, EDA tools outputs, etc...
- Video Conference Service to conduct design review meetings at the lower cost and with the highest efficiency
- EnginFrame technology to offer to the remote (Internet) customer a Virtual Internet Desktop (VID) to use to run simulations, view results of EDA tool runs and monitor project progress. The VID allows a secure access to a few selected services and applications offered by the Accent Computing Farm using the data of the project jointly developed.
- Secure and dedicated FTP access for data sharing
- E-mail encryption technology

All the services offered above allow to implement a **Secure Site-less Design Team** focused at achieving the business objectives in the shortest timeframe that is possible.

An Example of Virtual Internet Desktop

Here is presented a project case where Accent has built a specific Virtual Internet Desktop to enable a large European cellular phone manufacturer to simulate the application firmware of the phone using the SOC design developed by Accent and mapped just for this purpose on an FPGA and an application board.

This kind of collaboration was however subject to important constraints:

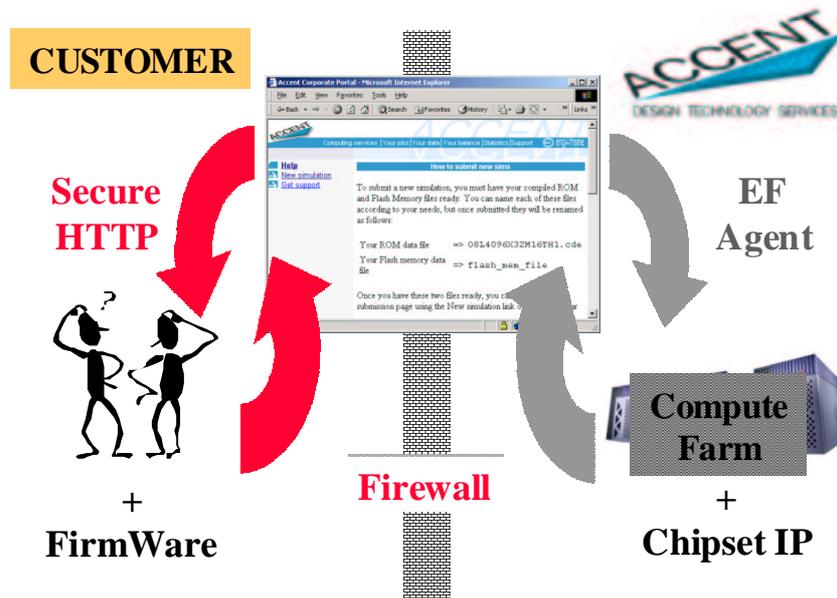
- The licenses of the simulator could not be used outside Accent;
- The Intellectual Property of the chipset and related EDA technology should not be exposed to anybody outside Accent;
- A remote simulation capability was requested to Accent for six months; remote simulation was preferred against on-site assignment due to lower costs and greater flexibility in in-house assignments

EnginFrame made it possible

EnginFrame was designed as a tool to provide a web interface to Corporate applications. Its core advantage is an instant migration to the **Computing Portal paradigm**, i.e. an intuitive web-based interface to computing and engineering resources. With this approach, users can take advantage of all of the benefits of the Corporate ASP concept, yet using their functional existing infrastructure.

Computing resources (such as EDA simulation tools) thus become services that can be efficiently accessed using the corporate Intranet, Extranet or even the Internet. This hides the complexity of Technical Computing environments to the users, who can enjoy a much more comfortable, rich and coherent experience, focused on services rather than the technologies behind these services.

This approach was exactly the **breakthrough solution** needed to wipe out all constraints and overheads associated with the **collaborative e-Design**.



Accent's customer engineers can now connect to the Accent ASP environment, which allows them to have up-to-date simulations and get valuable debug information about their software, whenever they need them and how often could be useful.

Simulations are delivered through a dedicated Web interface, and can be accessed without the need of any specific client software. Users are entitled to submit and monitor their simulation using their usual browser. Upon completion, they are able to download the results of their simulation, and post-process them locally on their workstation.

This approach has provided tremendous benefits:

- Savings in time, travel and logistic costs
- Simulation from different Customer's sites allowing the participation of designers located in different customers' premises
- All existing infrastructure is left intact
- No dedicated hardware or software; the existing hardware and software computing farm is simply used when it is required
- Minimum administrative IT effort
- The Intellectual Property is fully protected
- Secure access: only specific files can be returned to the user; all operations are logged; access is granted at IP level with a password
- Pre-coded simulation scripts reduce simulation knowledge requirements by the firmware designer
- No training needed
- Availability of the service 24 hours a day

About Accent S.r.l.

Accent S.r.l. is a joint venture incorporated in 1993 between STMicroelectronics S.r.l., a global leader in the design and manufacture of semiconductors, and Cadence Design Systems Inc., a world leader in software and services for electronic design.

Accent's mission is to contribute to its customers' business success by providing state-of-the-art technology, methodology services and design services in the electronic design domain.

Accent business model is to help leading electronic manufacturing companies improve product quality and reduce time to market by complementing existing resources with additional skills, capabilities, and our design portfolio. For small to medium-sized companies, Accent can provide the expertise to open up new markets and exploit new business opportunities in the world of microelectronics, multimedia and telecommunications technologies.

Thanks to the breadth of its capabilities, the size of its operations, the financial strength of its shareholders, and its unrivalled track record, Accent provides a reliable, effective and fully-comprehensive one-stop shop for a wide variety of applications in the electronic domain.

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About NICE and EnginFrame

NICE mission is to establish enduring relationship with customers by jointly solving problems related to computing resource management, in order to support the increasing demand of information technology solutions for Technical Computing.

NICE flagship product **EnginFrame** provides an efficient infrastructure to put Corporate applications on the corporate Intranet/Internet. Its core advantage is an instant migration to the **Computing Portal** paradigm, i.e. an intuitive web-based interface to computing and engineering resources.

EnginFrame is strictly integrated with Load Sharing Facility (LSF) from Platform Computing, MetaFrame™ from Citrix and other leading computing infrastructures.

Founded in 1996, NICE offers IT solutions built on top of industry leader **software products** aimed at company-wide publishing, optimization and rationalization of computing resources. Our qualified personnel can provide consulting services related to Inter-Intranet Corporate ASP, heterogeneous systems integration, Java development, technical computing optimization, performance analysis, parallel and distributed computing.

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