

## PRESS RELEASE

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### **Analysis of Solution Architects' SolutionPath™ Technology Expedites Delivery of New Applications and Reduces Maintenance Costs for Leading Financial Services Company**

13 March 2002, San Francisco, CA –Solution Architects, Inc. (SA), a software consulting and development firm, announced today an analysis of the impact of its SolutionPath™ architecture and reusable components in the development and deployment of new applications at the Charles Schwab & Co., Inc. The analysis, performed in conjunction with staff from the Schwab Institutional Frameworks Division, which provides support to independent, fee-based investment advisors, showed significant savings were achieved in the delivery of not just new development but in maintenance activity on production applications. Specifically the following conclusions were found:

- Using SolutionPath technology a new trading system was developed using approximately 66% fewer developer resources and 87% less budget than it took to develop a comparable system using traditional methods. SolutionPath's reusable components already built and in use in other applications, directly contributed to the reduced need by providing approximately 70% of the required code for this application.
- A new workflow application was developed in 50% of the time projected due to the availability of SolutionPath reusable components.

Recently seven new applications, all developed using SolutionPath technology, were ported to Java 2 and WebLogic 5.1. Because of the level of reused components across these applications, the porting effort was reduced by 80%, requiring 5 staff-weeks to perform instead of the 28 staff-weeks projected with traditional application development.

- Three of these same applications were recently tuned for performance. Again the level of reused code reduced the time needed for this effort by almost 90%, requiring 12 staff weeks for all three applications not the projected 16 staff weeks per single application with non-reusable technology. Performance tuning occurs after a developed application is ready for beta release or use in a production level environment - the application is "tuned" to ensure optimum implementation. In addition, performance improvements were made primarily in code reused by all three applications - so tuning one application resulted in improvements

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in other applications (e.g. the trade file execution system received no custom improvements yet its operating performance increased 3 times over its performance prior to tuning).

- Further cost savings of at least 50% are projected for standard application maintenance for all applications using SolutionPath technology over the same costs required for non-SolutionPath applications.

“To give you an idea of how much reuse is going on at Schwab these days, these three trading systems all use the same business model, validation, state management, persistence, database access, and error handling code. That means that all that code was developed once, and now can be used again and again”, said Rich Freyberg, senior vice president of Schwab Institutional Technology. “Less code, used and tested repeatedly, results in fewer bugs, faster development and less required maintenance.”

“We can accomplish these savings because the high level of reuse significantly reduces the size of the code base and therefore reduces the effort needed for new development and maintenance activity, such as Java 2 ports,” says Asim Qadir, President of Solution Architects, Inc. “Also the layered architecture sequesters Java 2, WebLogic and other third party compatibility issues, shielding application developers from them”.

Reuse is a frequently promised but often-unrealized benefit of object oriented software design whereby software assets that can be used repeatedly across multiple applications are created.

### About Solution Architects:

Solution Architects, Inc. is an experienced and results oriented software consulting and development organization providing sophisticated IT solutions to its clients. It delivers complex client/server applications that are easy to use, easy to maintain, extensible, and scalable using the best tools and practices in the development industry. The company has provided these solutions over the last ten years to numerous large financial services institutions. Information on Solution Architects can be found at the company’s website, <http://www.solutionarchitects.com>.