

Corporate Backgrounder

verum[®]

Tools for building
mathematically
verified software

Focus

Verum Software Technologies, based in Waalre, The Netherlands, is a young software tools company focused on turning the art of software development and programming into an engineering discipline. Today, software development remains the last area of engineering to adopt mathematically sound principles for designing software that touches everyday lives. Verum's mission is to create tools that enable software architects to formally prove that their software is correct, complete, and defect free before a single line of code is written. Verum employs a team of Formal Methods Specialists, Embedded Software Architects, and Embedded Software Tools experts to develop advanced tools for achieving this goal.

History

Verum was founded in 2004 by Robert Howe and Guy Broadfoot. The company initially offered software consulting services, helping Dutch companies develop defect free software for controlling complex machinery. The company developed its own internal tooling, based on Formal Methods techniques developed at Oxford University, England and the work of the company's Research and Intellectual Property Director Dr. Philippa Hopcroft. As the company grew, more customers asked for access to Verum's internal tool so they could mathematically verify their own software without outside help. This prompted Verum to change business models, and scope; in 2009, the company released its first commercial product, the ASD:Suite, trained customers to use it, and provided licenses for its use. Recently, Verum has grown its business by expanding to neighboring geographic markets and countries like India where there is a concentration of software development.

Markets Served

Verum's main market can be characterized as the software design automation marketplace. In this marketplace, customers buy, lease, or subscribe to use, via a *Software as a Service (SaaS)* usage model, a large variety of software modeling tools packages which enable them to leverage the skills of highly trained architects, thereby improving productivity. Verum focuses on customers who develop business critical software (i.e. software that must be defect free because it is used in products that have high repair costs, high recall costs, or high costs of failure). Further, target customers are those who: face difficulties in translating user requirements into engineering specifications; face time to market pressures dictating concurrent hardware and software development; produce products with high quality norms mandating extensive testing of software ; or perhaps work in an ecosystem where there are numerous subcontractors delivering software sub-components. Under these conditions, the company's markets include: medical, semiconductor, electronics, packaging, robotics, and mechatronic equipment manufacturers. In addition, security, communications, and automotive component manufacturers also benefit from the company's products.

Main Products & Benefits

The company's main product, an Analytical Software Design Suite of 3 tools, is sold under the name ASD:Suite. The suite consists of a tool for building models of software components and entire systems; a tool for verifying that the models are mathematically correct and without defects; and a tool for automatically generating common production codes in languages like C, C++, C#, and Java. Multiple case studies have demonstrated that the ASD:Suite reduces the cost of software development by at least 30%, while vastly reducing the possibility of software defects entering the marketplace. ASD:Suite is supported by a team of Verum's dedicated consultants who help customers adopt the product for new designs, and to facilitate the transition of writing software as an art to making it an engineering discipline.

Investors

Besides financing from the two principals, Robert Howe, and Guy Broadfoot, the company has been financed using a combination of venture based funding, loans, and subsidies. Minority stakes are owned by Shatho Beheer, Redstone Corporate Finance, a few angel investors, and the employees themselves.