

- press release -

THE CORVALLIS GROUP ACQUIRES 65% OF JULIA, SPIN OFF OF THE UNIVERSITY OF VERONA

The company has created the first information technology tool capable, using the abstract interpretation method, of absolutely and precisely identifying bugs in programs written using Java and Android language.

The **Corvallis Group** has acquired 65% of the shares of **Julia**, software company created in 2010 as a spin off of the **University of Verona**. Julia was the first of the six start-ups of the University of Verona to come out from the university incubator. The company was the result of ten years of studies and research of a team of Italian university teachers and researchers, in collaboration with international universities. The Verona spin off already has under its belt important collaborations, like the one with the **United States Air Force**, and those with some of the most important Italian banking and insurance groups. Julia has produced the first information technology tool based on "abstract interpretation", a scientific rule recognised at international level, for the automatic identification, with absolute accuracy, of bugs in programs written using Java and Android language.

after the minibond

For **Corvallis**, one of the top 20 companies of the Italian Information Technology sector, with 111 million turnover and a staff of 1300, this is the first acquisition after the issuing last December of an **8 million Euro minibond**, intended to support the growth plans of the group. The Corvallis investment, which will exceed one million Euro, will be used as support for the industrialisation of the product, and the growth of the company. The new Board of Directors of Julia has reconfirmed **Gianni Zucchini** as Managing Director.

first "spin off"

Julia operates in a sector destined to experience a fast expansion: the Software Code Analyzer (**SCA**) sector for the prevention of risks connected with software program errors. A field of application that can extend to all the markets where software programs are present, safeguarding companies from the consequences of damage and the losses caused by critical "bugs" that can emerge even after the software program has been created, and made available to the final user. Its use can expand from the industrial sector, to electronics, telecommunication, finance, defence, and healthcare.

"We strongly believe in the future of the technology, and in the applied research," stated **Antonio Santocono**, President of Corvallis Spa, "and we have decided to invest in a product suited to a wider and wider number of markets. In a world where software programs acquire a more and more important role, information technology security is an added value that must be pursued, both by companies and private consumers."

"Many bugs" explains **Fausto Spoto**, founder of Julia and member of the current research team with **Roberto Giacobazzi** and **Frédéric Mesnard**, "appear after the software has become operative, causing, in the best of situations, loss of data and time. In the worst scenario, the error can even bring telephone, medical-surgical, industrial, or military equipment to a standstill. Automatic preventive search is becoming more and more sought after, also by the producers of software, who wish to prevent financial damages, but also damage to their own image."

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Julia, the "bug hunter"

*Julia, acronym of Java Universal Interpretation and Abstraction, is a Java code analyser developed in the last 10 years within the framework of research projects driven by an Italian-French team, with the involvement of the University of Verona and the University of La Réunion. The academic research team, which will continue to retain 35% of the company capital, consists of **Fausto Spoto**, lecturer of information technology at the University of Verona, **Roberto Giacobazzi**, former President of the Faculty of Mathematical, Physical, and Natural Sciences of the University of Verona, and **Frédéric Mesnard**, former Director of the Department of mathematics and information technology of La Réunion.*

Julia is an actual real "bug hunter" in Java and Android programs. There are in the world tens of tools created with the same objective. What sets Julia apart from its competitors, and makes it a unique product in terms of precision and efficiency, is the use of the most modern and recognised techniques of abstract interpretation, which provide a static and semantic software analysis. Julia does not ask for the source code of the analysed program, but only the filled bytecode. The method reduces the number of possible statuses of the system through abstraction, and thanks to the availability of memory and calculation power, makes it possible to analyse all the variables of the program, in each execution path. The tool lists a number of warnings (potential bugs) that must be analysed by the programmer, who is finally responsible for deciding if the warning really represents a problem, and for correcting and strengthening the program. This method guarantees that all the bugs of the investigated type will be found.

On the other hand, the main market competitors largely use the Pattern-matching method to detect errors. In very simple terms, this technique consists in mechanically finding in the source file "sequences" recognised as typical sources of error. In this way, the tool shows to be unable to identify all the errors, but only those that fall within the pattern searched for. In addition, the need to have source files available, often makes it impossible to analyse third party libraries.

Using SCAs (Software Code Analyzers) when developing software, gives the possibility of quicker diagnostic at various levels of the coding and testing stages, and at the subsequent stages connected with the management of patches and updates. The value of SCAs is strategic also as far as security, as hackers build their attacks mainly on the defects and faults of the programs. By guaranteeing the quality of the development, automatic analysis tools not only improve the efficiency of the programming process, but also contribute to ensuring the invulnerability of the software, and therefore the reputation of the company.

Anticipating the use of a SCA in the SLM (Software Lifecycle Management), therefore enables to implement leaner processes, reduce debugging costs, and obtain software that is more secure, functional, usable, available, efficient, maintainable, and portable.

The "Automated Software Quality" (ASQ) market, of which Julia is part as SCA, shows a significant gap between the need of the companies to improve their productivity, and the lack of solutions capable of meeting such need. Less than 10 main players have created a world market of over 2.4 million dollars, in continuous growth.

With over 25 years of experience and registered offices in Padua, Corvallis focuses its offer on the Financial sector (72%), Public Administration (18%), and Industry and Services (10%). The company capital is mainly controlled by the founding shareholders, Antonio Santocono, and Enrico Del Sole, and for 43.5% by NEM Sgr, an asset management company part of the Banca Popolare di Vicenza Group. In 2014 the company reached a turnover of 111 million Euro, with a 48% increase. The company has a staff of approximately 1300, distributed across Italy, in the branches of Padua, Milan, Turin, Rome, Florence, Bologna, Verona, Brescia, Lamezia Terme, Caltagirone, and Lecce.