Crete becomes the Silicon-Island of high technology research and development

The technology excellence of FORTH grows as a key European research centre and attracts a growing hub of high-tech corporate development

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FORTH – Foundation for Research and Technology - Hellas, in Heraklion, Greece and KALEAO Ltd. – High Tech company based in Cambridge, UK – announced today the creation of the KALEAO's Heraklion development centre that officially seals their on-going collaboration towards a joint research lab on low power computing and shows a clear indication of the growing international high-tech involvement in Crete, Greece. The centre is going to be inaugurated on the 30th of June in Heraklion.

FORTH is one of the largest research centers in Greece with modern facilities, highly qualified personnel, and a reputation as a top-level research foundation worldwide.

KALEAO designs and manufactures advanced computer systems and delivers solutions based on its innovative approach to web-scale computing.

Commenting on these new developments, Manolis Katevenis, Head of the CARV Laboratory and Deputy Director of the Institute of Computer Science (ICS) of FORTH, said: "We are proud of the 33-year history of FORTH and ICS, as well as of the CARV Laboratory and the numerous hardware and software prototypes that we have built here. We are very happy with our collaboration with KALEAO, a really innovative company on the leading edge of modern high technology, and we look forward to jointly making many more innovations. I feel that we now have an R&D environment in Crete which is at the forefront of worldwide high technology, and I invite all interested computer scientists and engineers in hardware design and in systems software to contact us, with the prospect of becoming part of this growing environment."

To the declaration of FORTH, Professor John Goodacre, co-founder and CSO of KALEAO, added: "We are very happy with our development centre in Crete and with our collaboration with FORTH, since these yielded the design of key components of our flagship solution KMAX. With the increasing research agenda of the CARV Laboratory at FORTH and the new KALEAO development centre in the Science and Technology Park of Crete (STEP-C), we expect to see an increasing collaboration between FORTH and industry, collaboration that creates new exciting academic and job opportunities in silicon high-technology in this beautiful Greek island – The new ``Silicon-Island''.

FORTH started collaborating with the founders of KALEAO in *EuroServer, a* research project part of the European Union's FP7 programme. *EuroServer* focuses on the innovation and implementation of new computer system solutions to enable the power efficient delivery and scalability of computing for the server market.

One of the goals of *EuroServer* is to research and innovate key components towards ARM-based micro-servers. FORTH, as a partner of the project, designed various hardware prototypes of key

importance for the project, including significant operating system software components. These systems leverage ARM based processors to obtain very high energy efficiency, in line with the growing requirement of low power IT infrastructure coming from the industry.

"The largest problem with data centres, today, is their growing consumption of electricity" – added Professor Manolis Katevenis – "It is estimated that if the data centres of USA alone were a country, that country would be listed 12th in the world in electricity consumption, somewhere between Italy and Spain".

To reduce their energy consumption, data centres must build their servers using new platform approaches and more energy-efficient components. KALEAO leverages ARM based technologies in a platform capable of delivering unprecedented computing capabilities to the data centre and IT infrastructure in terms of energy efficiency, density, agility, and IT simplification.

Last week, KALEAO unveiled KMAX, their new commercial product, offering a true converged rack mountable hardware platform and software computing appliance. The low-power ARM-based KMAX is capable of offering 192 eight-core servers with 48 solid-state disk (SSD) slots within just 3U height of rack space.

"Today's data centres are made of hundreds to tens of thousands of server computers and form the back-bone of Information and Communication Technology" – commented Professor John Goodacre – "The KALEAO KMAX solution provides a true converged platform with appliance-level simplicity, to reduce the total cost of ownership while delivering a rich catalogue of services, including content on the web, databases, social networks, telephony, on-line transactions, and smart storage".

FORTH is a founding partner of *HiPEAC*, the European Network on High Performance and Embedded Architecture and Compilation, which coordinates European research in these areas; KALEAO is also a member of that same network. FORTH's technological innovation continues through participation in a group of three European Horizon2020-funded projects that further develop this technology approach, *ExaNeSt*, *ExaNoDe*, and *ECOSCALE*.

For more information:

- www.kaleao.com

- www.ics.forth.gr