Oak Ridge National Laboratory acquires Atos Quantum Learning Machine to support US Department of Energy research

Paris (France), Irving, TX (USA), November 13 2017 – Atos, a global leader in digital transformation, today announces a new contract with US-based Oak Ridge National Laboratory (ORNL) for a 30-Qubit Atos Quantum Learning Machine (QLM), the world's highest-performing quantum simulator.

Designed by the 'Atos Quantum' laboratory, the first major quantum industry program in Europe, the Atos QLM combines an ultra-compact machine with a universal programming language. The appliance enables researchers and engineers to develop and test today the quantum applications and algorithms of tomorrow.

As the Department of Energy's largest multi-program science and energy laboratory, ORNL employs almost 5,000 people, including scientists and engineers in more than 100 disciplines. The **Atos QLM-30, processing up to 30 quantum bits (Qubits)** in-memory, installed at ORNL was **operational within hours thanks to Atos' fast-start process**. Set up as a stand-alone appliance, the Atos QLM can run on premise ensuring confidentiality of clients' research programs and data.

ORNL's Quantum Computing Institute Director, Dr. Travis Humble says:

> *"At ORNL, we are preparing for the next-generation of high-performance computing by investigating unique technologies such as quantum computing.*
> *We are researching how quantum computing can provide new methods for advancing scientific applications important to the Department of Energy.*
> *Our researchers focus on applications in the physical sciences, such as chemistry, materials science, and biology, as well as the applied and data sciences. Numerical simulation helps to guide development of these scientific applications and support understanding program correctness. The Atos Quantum Learning Machine provides a unique platform for testing new quantum programming ideas."*

Thierry Breton, CEO and Chairman of Atos, adds:

> *"We are glad to accompany Oak Ridge National Laboratory from the outset in what is likely to be the next major technological evolution. Thanks to our Atos Quantum Learning Machine, designed by our quantum lab supported by an internationally renowned Scientific Council, researchers from the Department of Energy will benefit from a simulation environment which will enable them to develop quantum algorithms to prepare for the major accelerations to come."*

In the coming years, quantum computing should be able to tackle the explosion of data brought about by Big Data and the Internet of Things. Thanks to its innovative targeted computing acceleration capabilities based in particular on the exascale class supercomputer Bull Sequana, quantum computing should also foster developments in deep learning, algorithms and artificial intelligence for domains as varied as pharmaceutical or new materials. To move forward on these issues, Atos plans to set up several partnerships with research centers and universities around the world.

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About Atos

Atos is a global leader in digital transformation with approximately 100,000 employees in 72 countries and annual revenue of around € 12 billion. European number one in Big Data, Cybersecurity, High Performance Computing and Digital Workplace, the Group provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies, digital expertise and industry knowledge, Atos supports the digital transformation of its clients across various business sectors: Defense, Financial Services, Health, Manufacturing, Media, Energy & Utilities, Public sector, Retail, Telecommunications and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos SE (Societas Europaea) is listed on the CAC40 Paris stock index.

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