**A decision with wider impact: MTU Aero Engines joins Open Invention Network (OIN)**

* **Engine manufacturer has long relied on open-source software in development**
* **Joining OIN underscores Linux community support**

Munich, September 15, 2022 – MTU Aero Engines, Germany’s largest engine manufacturer, has joined the Open Invention Network (OIN). The industry consortium collects patents to protect the Linux environment. The patents are available to any interested party to use free of charge as long as that entity does not file patent claims against Linux or any other software involved.

“We support OIN because it's important to us to keep the Linux kernel free of patents and possible lawsuits. The network enables a lot of interaction within the community. By joining, we are saying that we stand behind Linux and want it to stay open,” says MTU CIO Dr. Lutz Seidenfaden.

MTU has been using and supporting open-source software for 20 years now. MTU was the first major industrial company in Germany to decide in favor of a Linux cluster when building up additional computing capacity. About 450 development engineers work with computing-intensive simulation programs to develop competitive engines at MTU. Complex algorithms make it possible to predict the aerodynamic, thermodynamic, and mechanical behavior of components as early as during the design and configuration phase, thereby optimizing component geometry.

“Within our organization, we have thousands of Linux-based applications in the field of engineering, most of which arose at MTU,” explains Dr. Moritz Kessel, team leader for CAE IT analytics, who is responsible for the working group that deals with Linux infrastructure at MTU. “Wherever the expertise from our engineering team goes into our computing power, we’ve been relying on Linux for two decades. That’s because even back then, it enabled applications that didn’t even exist on other platforms. It’s also because it’s relatively cheap. And because it’s still the platform that next-generation computer scientists work on even when they are still in college.”

Another important aspect of open-source software is the flexibility it affords in terms of the use of the software, which is not artificially restricted by complicated licensing terms. This freedom in the design of the IT architectures enables innovative solutions for things like dynamic load-driven distribution of applications to container infrastructures. These solutions are difficult to impossible to implement cost-effectively outside the open-source world.

“For us, joining OIN is a statement,” says Nadia Zerelli, head of the Engineering Systems department at MTU Aero Engines. “Linux has given MTU added value that can’t be expressed in euros. We have powerful software available for designing, configuring, and producing engines and for fleet management. One especially valuable aspect is the freedom to continuously further develop and refine perfectly tailored tools and methods to design and configure our high-tech products ourselves.”

Linux has also led to standardization of the Unix world, which permits high degrees of consistency and automation within the company. At MTU, for example, everything from the engineering desktop and high-performance computing cluster to the Web infrastructure and SAP servers is based on the same MTU image. In addition to very high efficiency in operation – resulting from high levels of automation due to the standardized environment – this also involves quality assurance that enables outstanding availability of the MTU applications.

“At MTU, supporting and cultivating expertise is a part of the corporate culture,” Zerelli says. That’s why the company works with centers of competence at universities and supports the dissertation projects of next-generation scientists and scholars. “We have close ties to the academic and research community, and not just in the technical field of aircraft engines, either. In the CAE software segment as well, we deliberately refrain from keeping innovations to ourselves.”

MTU is one of the leading companies in innovative engineering, but that isn’t all. Its engineering IT is also state of the art. The engineers have 1.3 petaflops of computing power at their disposal. That level of power is in line with the world market – but it is all exclusive to MTU.

More than 3,300 companies, municipalities, and organizations are members of OIN. They include Google, IBM, NEC, Toyota, Renault, SUSE, Philips, Alibaba, HP, Juniper, Facebook, Cisco, Casio, Huawei, Fujitsu, Sony, and Microsoft.