Develop Software resource usage model

Background information
A key driver for ASML lithography machines is performance, which is measured in number of wafers per hour.

ASML lithography machines are driven by complex Software. This Software is deployed on multiple computer systems and consumes resources. Complex SW behavior might occasionally exceed the amount of available resources thereby impacting performance. This would reduce the production capacity of the machine. A perceived solution is to have a clear view on computing resource usage and eventual hotspots, enabling eventual improvements.

You will be working together in a team of System SW architects responsible for the overall SW architecture. This team is integral part of the Software Development Department consisting of 500 - 1000 Software engineers.

Your assignment
Your internship consists of studying the current execution architecture aiming to identify resource usage bottlenecks and working out an improvement proposal. Concrete work includes but is not limited to:

- Creating/re-using existing tools to visualize and track resource usage
- Creating overview of current CPU, Network and Memory usage and deployment overviews
- Identifying resource usage bottlenecks/hotspots
- Developing improvement proposal for identified hotspots with future scalability in mind
- Assessment of the current HW technology choices

Your profile:
HBO/Master student computer science, familiar with Execution Architecture, real-time system design, constrained resource execution/modeling. Internship period, up to 6 months 4/5 days a week. Start date: 2014-Q2/Q3.

What ASML offers
Internship allowance of 500 euro (maximum) plus a possible housing allowance of 250 euro. In addition, you’ll get expert, practical guidance and the chance to work in and experience a dynamic, innovative team environment.

Join ASML
ASML is leading in the worldwide development, production and sales of high-end lithography systems for the semiconductor industry. Almost 10,000 people worldwide work at ASML at offices in the United States, Asia and at the corporate headquarters in Veldhoven. ASML employees share a passion for technology with a customer focus. At ASML, we work collectively to further develop and implement complex and high-quality technological systems. Working at ASML is therefore challenging and dynamic, with ambitious objectives and high standards key to our continuing success. But hard work here pays off: ASML invests in the development of its people and successes are shared. ASML promises mutual commitment to our growth and yours.

Join ASML’s expanding multidisciplinary teams and help us to continue pushing the boundaries of what’s possible.

Field: Software Engineering
Contact: internships@asml.com
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