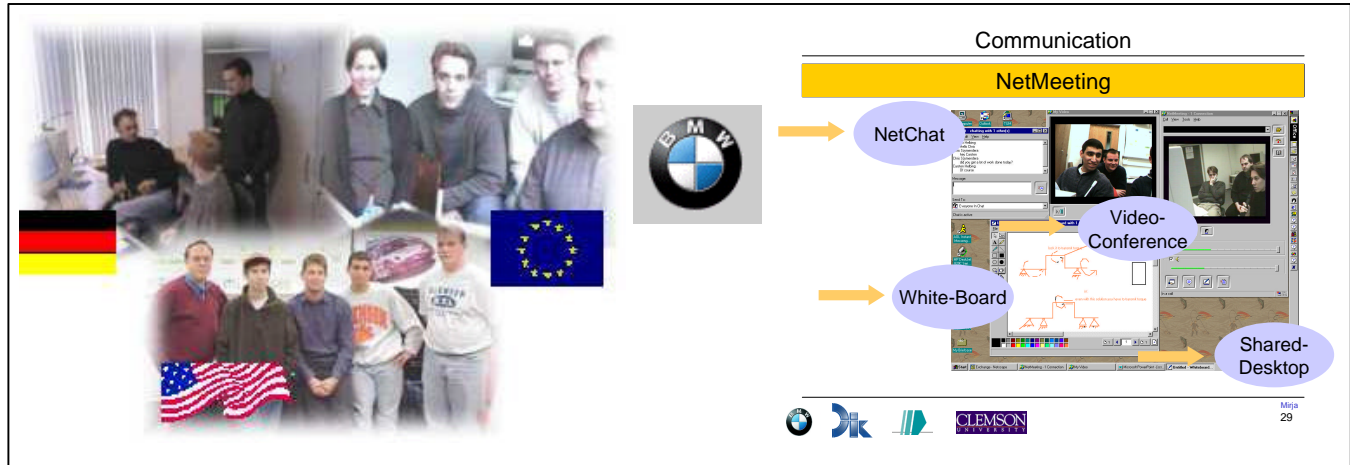


Project Title: **24HR DISTRIBUTED DESIGN**
“DISTRIBUTED DESIGN OF A 1-CYLINDER TESTBED ENGINE”



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Project Duration: Jan 2000 – Mai 2000

Project Partners: BMW Group, Technische Universität Darmstadt, Technische Universität München (Germany)

Funding: BMW

Project Abstract:

Time to market is a big issue for any manufacturing company in today's highly competitive market. Another driver is the globalization of the market, and the emergence of global companies with expertise distributed all over the world. An attempt to accelerate the design process is to use a shift system to increase working time. With engineers distributed all over the world, and using their expertise during their working hours, the concept of a 24h design process may be realizable.

This project aims at developing the methodology to perform 24 hours distributed collaborative design. Every team works on the design task (1-Cylinder Testbed Engine) and passes it to the next team in a different location (time zone). Different scenarios on how to distribute the work were tested and analyzed. Social (teaming issues, language barriers, educational backgrounds) and technical problems (Design process, Units, CAD issues) were recorded and resolved through the help of the design team and special design coaches.

The goals of the project were to experiment and test distributed collaborative design and to come up with a novel design concept for a 1-Cylinder Testbed Engine for a car manufacturer. The three teams located in Clemson, Darmstadt and Munich consisted of 3 students and a “coach” each, in addition to Faculty and additional staff (TUM and BMW) at the various locations.