

“The industry is our lab” – Organization and conducting of empirical studies in software engineering at Simula

Dag Sjøberg^{1,2}

¹ Simula Research Laboratory, P.O.Box 134, NO-1325 Lysaker, Norway

² Department of Informatics, University of Oslo, P.O. Box 1080 Blindern, NO-0316 Oslo, Norway

Abstract

The society is completely dependent on reliable and efficient software. Development of such software requires the use of appropriate processes, method and tools. To evaluate their appropriateness in various industrial settings, empirical studies are needed. At present, most studies in software engineering are run with students in artificial settings. The strategy of Simula Research Laboratory to invest in experiment infrastructures and hire professionals as subjects has contributed to a significant improvement of state of the art regarding the *realism* and *scale* of experiments and *control* in real-life case studies. During its first eight years, Simula has conducted studies that have included about 6000 professional software developers and managers from 273 companies in 25 countries. However, increasing the realism of tasks and systems in experiments and control in case studies is still a challenge for Simula and the rest of the research community.