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TO: Sabbatical Leave Committee
FROM: Professor Karl J. Lieberherr
DATE: November 15, 2004
SUBJECT: Sabbatical Leave Proposal

1. Statement of Purpose. I would like to apply for a half-year sabbatical leave at full salary for academic year 2005-2006 (tentatively the second half).

My goals for the sabbatical are

- to push Aspect-Oriented Software Development (AOSD) technology, a promising technology in which the College of Computer and Information Science is one of the pioneers, into wider use through publications, tools, teaching and collaborations with industry.
- to develop AOSD technology further and to attract more funding for this work. To find good application areas: a fruitful application of AOSD is the area of software security. Another interesting application area is tool development for life scientists. I have developed a connection with Novartis in Cambridge (Mischa Reinhardt) and I hope that by the time of the sabbatical this will have developed into a project. Life scientists need to integrate many diverse tools and I believe that AOSD can play an important infrastructure role.

The results achieved during my sabbatical will flow both into my teaching and subsequent research activities.

2. A more detailed description of my planned activities and deliverables. I plan to spend some time with Novartis either in Cambridge or in Switzerland. The goal of this visit is to work directly with life scientists and develop new integrated tools that serve their needs better. A part of my sabbatical will be spent on technology transfer by developing courses for CCIS/Professional and Continuing Studies based on our expertise in AOSD and software security. Expected deliverables for the sabbatical are: Paper on AOSD and security, paper on AOSD and tool integration for life sciences, proposals related to those two topics, industry course on AOSD.
3. My curriculum vitae including my list of publications is included.
4. Prior Sabbatical. A copy of the previous sabbatical proposal is enclosed. In my previous sabbatical I learned a lot about the practice of software development in a big financial institution: UBS Switzerland. This experience was valuable for both my undergraduate and graduate courses on software development. My sabbatical visit to UBS was returned by a sabbatical visit of Andreas Kuenzli from UBS to Northeastern. Although no scientific publications have resulted from this collaboration, it has given me valuable background material for both my teaching and my research. A concrete result was a high-level model of service industries, including banks. A visit to ABB in Switzerland resulted later in a \$ 120,000 grant to Northeastern.
5. This is my third request for a sabbatical and it will be my twenty-first year at Northeastern.