



## School of Engineering

Computer Science  
Department

Center for Software  
Engineering

An open letter to potential Affiliates

March 2000

The University of Southern California Center for Software Engineering (CSE) would like to have your company join the Center for Software Engineering as an Affiliate.

The CSE vision is to improve the state of the practice of software engineering through research into the phenomenology of software development in the face of the rapid change that the industry experiences. Our goals include research and development of practical software technologies Affiliates can use to cut costs and speed products to market, and training and educating the skilled software leaders who can tackle the challenges of the next generation.

Our current affiliate base includes: commercial and aerospace firms; US Government branches; Federally Funded Research and Development Companies (FFRDCs) and consortia; and one international University. The commercial firms include C-Bridge, EDS, Fidelity, GroupSystems.com, Hughes Network Systems, Lucent, Microsoft, Motorola, Rational, Sun, Telecordia, and Xerox. The aerospace affiliates include Boeing, Draper Labs, GDE Systems, Lockheed Martin, Northrop Grumman, Raytheon/East, Raytheon/West, SAIC and TRW. The US Government affiliates include the FAA, US Army Research Labs, US Army TACOM, and USAF Research Labs. FFRDCs and consortia include Aerospace Corp., IDA, SEI and SPC. Additionally, our one international Affiliate is Chung-Ang University. We also have working relationships with Universities and University research labs such as UCI's Institute for Software Research, Univ. of Maryland, and USC's ISI.

Information and tools form the basis for the tangible benefits of membership. One of the quintessential benefits is an annual one-day visit of a Center Professor to the Affiliate, tailored to the affiliate wishes. For all the events at USC, Affiliates are encouraged to send multiple representatives who are welcomed to attend parts or all of the events. CSE hosted visits to USC include the Annual Research Review, usually held in February of each year, and ad hoc visits which many affiliates couple with recruiting. Also, Affiliates are our guests at CSE hosted conferences like the COCOMO and Software Cost Modeling International Forum. Such conferences often include tutorials, all at no registration cost to the Affiliate. The CSE hosts Executive and Focused Workshops, usually three per year, which offer additional opportunities for information exchange and transfer. These workshops also provide a mechanism for Affiliates to influence the direction and content of our research. Finally, CSE hosts the local monthly LA Software Process Improvement Network (SPIN). Of course, CSE is always happy to provide our non-local Affiliates with the SPIN presentation materials.

While most of the CSE technical reports are made available to the general public through our website, Affiliates are provided with early access, i.e., pre-publication or prior to public availability, through a controlled-access portion of our website. For instance, CSE will make portions of our COCOMOII book and CD, as well as updates and interim releases of the COCOMO II.2000 software, available only to Affiliates through the Affiliates Area of the website.

On the tools front, CSE makes most of its tools available **as-is** to the general public through our website since use and feedback on the tools furthers our research. However, Affiliates also receive support, early access, and considerable influence on tool evolution. For Affiliates only, we provide telephonic, fax or email support for our tools directly from our researchers, with response times as good as those provided by commercial tool vendors. Many of our tools are first made available to Affiliates, through the Affiliates Area of the website, months prior to their being available to the public. Affiliate influence on tool evolution comes through both direct contact with the relevant researcher and through a seat on the CSE Technical Steering Committee. CSE's major tool areas include COCOMO II and the COCOMO Suite, WinWin, Architectural Analysis, Spiral Models, and integration of product and process models through MBASE guidelines.

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We would be happy to put together a conservative cost benefit analysis for just the tangible benefits to Affiliates. The table and calculation below show how such a figure would be arrived at.

Benefit	Value
Annual visit	\$4K to \$6K
Workshops	6K
Tools	30K
Support	10K

Investment	Cost
Membership	\$<AnnualFee>K

$$ROI = (<TotalBenefitsValue>K - <AnnualFee>K) / <AnnualFee>K = <calculate>\%$$

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The intangible benefits that our Affiliates enjoy include information access, influence, expert assistance, and early, informed recruiting access to graduate students. Early access to information, tools and technology provides Affiliates with a competitive edge through reduced time to market or reduced costs, or both. During the workshops and conferences there are always cross-affiliate information exchanges. The technical steering committee and the workshops explicitly provide mechanisms to influence the direction of CSE's research and products. CSE provides expert help with COCOMOII data collection and local calibration. Early, personal access to our Masters and Ph.D. graduates can both reduce recruiting costs and increase the probability of a good fit. For instance, one affiliate recently employed a Ph.D. graduate based initially on contacts made during on-campus workshops, saving the typical \$20,000 or more cost of recruiting. Most of these intangible benefits are listed on Page 17 of the CSE Brochure, "Membership Benefits & Contributions".

As a further indication of the focus of our research and technology transition, check out our web site, <http://sunset.usc.edu>. As an academic and non-profit organization, we make all of our research available. One of the main benefits of being an Affiliate is on-going, early access to the research and tools we produce. In addition, Affiliates influence both our research directions as well as the curriculum in Software Engineering. The Center both directly supports and influences that curriculum.

CSE gives Affiliates priority when it comes to pursuit of joint projects. These may be oriented to research, evaluation or development. Such projects provide specific information or results directly, and often exclusively (depending on the level of support provided), to the sponsoring Affiliate. The general information and results from such projects contribute to the Center's body of knowledge.

Dr. Barry Boehm and I look forward to your company becoming an Affiliate with all of its on-going, mutually beneficial implications. Our ideal arrangement is to have you join like most of our regular affiliates with the tax-deductible contribution (grant). There are many acceptable alternatives that we will be happy to explore, including coupling Affiliation with specific, focused research or technology transition activities for which there would be additional costs.

Sincerely,

A. Winsor Brown  
Assistant Director, USC-CSE