Preface

Researchers and practitioners of artificial intelligence (AI) and related fields might expect to see the phrase "Lessons Learned" in the title of a publication, as the title of a penultimate slide in a presentation, or as a section near the end of a report on a completed project. This focus on informally sharing lessons is an excellent way to communicate experiential information that may be valuable for reuse in future, related endeavors. So perhaps it is not surprising that this topic is taken very seriously by hundreds of organizations that invest substantial funds, time, and effort into developing knowledge management (KM) solutions for formal lessons learned (LL) processes.

There are several technical issues of AI interest in the implementation of LL processes, including lesson elicitation, verification, extraction, representation, storage, reuse, adaptation, evaluation, and learning. However, there have been few contacts between LL practitioners and AI experts, even in this time of rapidly growing interest in KM: software systems for supporting LL processes have received almost no attention in the AI community, and most practitioners have focused on initial system implementations that do not exploit AI techniques.

This situation recently changed. Members of LL organizations, especially those representing military and federal agencies (and their contractors), are searching for approaches that can solve their problems. Their primary motivation is that LL processes are extremely difficult to implement successfully, which helps explain why a disappointingly low number of people use LL systems. Given the current media buildup on KM, LL experts are easily finding information on KM strategies, both for developing changes in an organization's culture as well as suggestions for technology to use in software implementations. However, while it's easy to understand the benefits of some high-level strategies (e.g., the value of *embedded* KM solutions), it's not always clear what techniques should be used, in a given situation, to implement these strategies.

This workshop is devoted to enhancing communication between lessons learned (subject matter) experts and AI researchers and practitioners, with the goal of identifying AI techniques that can address known problems with implementing LL processes. Towards this goal, this workshop will feature presentations by several subject matter experts (approximately 10 of whom are expected to attend), who will explain their perspectives on lessons learned systems and issues that need to be addressed, and presentations by several AI experts, who will propose state-of-the-art AI approaches for addressing these (and related) issues. Focused panels and discussion periods will be held to enhance communication among the attendees. For example, given our involvement with the case-based reasoning (CBR) community and the large number of CBR contributions to this workshop, one panel will address the relation and distinction of LL processes/systems and CBR approaches.

This is the first workshop on this subject (LL processes and systems) in the AI community. Although work on expert systems, both case-based and rule-based, has addressed related topics, we found nothing in our survey to indicate that a previous, similar workshop has taken place between LL and AI experts. However, related workshops have been sponsored by the Department of Energy's Society for Effective Lessons Learned Sharing (SELLS) (www.tis.eh.doe.gov/ll/sells/index.html), the European Space Agency (www.estec.esa.nl/CONFANNOUN/99c06/index.html), and some DoD organizations (e.g., the Navy Warfare Development Command). For additional information, we maintain a page with links to LL-related workshops, organizations, and references at www.aic.nrl.navy.mil/~aha/lessons.

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