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### The Global Application of Collaborative Technologies

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## The Global Application of Collaborative Technologies: A World of Opportunities and Challenges

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Collaborative technologies, sometimes referred to as groupware applications given their deployment to support groups of individuals engaging in collaborative tasks, have developed rapidly in the last few years. Much of this expansion has been fueled by the dramatic increases in communication bandwidth and Internet penetration in societies around the world, making it possible for globally distributed teams to work on projects. The contexts where we see these technologies being applied range from those involving organisational communication and decision making through distributed software inspections and development to virtual education initiatives. The systems themselves include a wide variety of technologies that may include video- and audio-conferencing, shared calendaring, (digital) document management systems, text-based group support systems and many more.

The geographical spread of the applications is no longer restricted to the developed economies of Western Europe and North America, even if this remains the zone where most such application occurs. We have witnessed the emergence of teams with members distributed around the world, and we expect to see more such teams in the future. Inevitably, these distributed teams not only cross time zones, but also cultures - and it is in these cross-cultural experiences that some of the most interesting and valuable lessons can be learned. The opportunity to learn from people in different cultures is invaluable, as all too often these people bring their own insights, perspectives and values to bear upon the task context. Moreover, experience shows that collaborative technologies are adapted in local contexts to fit local norms and needs, with new technological and organisational forms emerging.

In this special section, we present seven papers that represent some of the most current wisdom on the global application of collaborative technologies. The eighteen authors come from six countries and the papers describe contexts that involve a wide variety of cultural and political settings, several being multi-country studies. In our leading paper, Paré and Dubé describe their experiences "in the trenches" of global virtual team work. They note that challenges come equally from technology and people, with critical issues involving cultural diversity, language differences and varying levels of IT proficiency, in addition to the accessibility, reliability and compatibility of available technology.

Galliers, Newell, Pan and Huang focus on the specific challenges for organisations that are attempting to employ collaborative technologies across the firm and around the world in the teeth of global competition. They present two cases of organisations that failed to make effective use of collaborative technologies, examining why failure occurred and drawing lessons for practice. We follow this pair of organisational cases with a single case that was partially successful: Kelly and Jones identify the

social infrastructure of distributed collaborative technology as deserving particular attention.

DeSanctis, Wright and Jiang emphasise the value that can be achieved through careful management of cultural diversity, such diversity being a strength to develop not a barrier to overcome. In their study of a multi-site global learning community, they note that asynchronous communication is preferable in contexts where cultural differences are extensive, people are not geographically proximate and team members are mobile. Evaristo complements this study with a pithy article on what he terms "non-consensual negotiation" - a phenomenon that occurred in a European grant proposal write-up process where team members were not only located in multiple settings and came from multiple cultures, but were in addition continuously on the move.

Massey, Montoya-Weiss, Hung and Ramesh investigate cultural perceptions of task technology fit, noting that people in different cultures do not adopt technologies in the same way. Rather than capitalising on this diversity, they recommend that team norms should be established prior to engagement so as to minimise subsequent problems. In our concluding paper, Qureshi and Zigurs provide an overview to the themes of this special section, identifying paradoxes and prerogatives inherent in global virtual communication, suggesting guidelines for reaping the benefits of virtual collaboration in the face of these paradoxes.

Together these papers guide the reader from experiences with real global collaborative efforts to implications for future such efforts. Although there remains a lot to be learned before the successful global application of collaborative technologies becomes commonplace and trouble free, the guidelines and heuristics presented in this special section offer valuable directions for practitioners and researchers alike.