

Systems of the Information Society

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This edition of ETHicol reports on some of the issues raised at the recent ETHICOMP 2001 conference held at the Technical University of Gdansk, Poland. The conference was attended by around 100 delegates from 17 countries. There were 80 papers presented at the conference. ETHICOMP 2001 was supported by IMIS and The British Council.

Systems based on computing technology are powerful change agents in everyday society. We need to consider not only the technological and economic issues but also the ethical and social issues when developing and implementing such systems. It is against this backdrop that the ETHICOMP conference series operates. The overall theme for ETHICOMP 2001 was "Systems of the Information Society". The conference focussed on the ethical and social impacts of these systems on society, organisations and individuals. This was done from four perspectives:

Software engineering

systems development and the relationship between quality, risk and ethics.

Teaching and learning

ethics education for computing students who are the professionals of tomorrow.

Virtual communities

social norms and tendencies of the Internet and the impact on families, friends, strangers, traders and consumers.

Citizens

the ethical impacts of computers systems on citizens in a variety of contexts such as the office, the factory, the school, and public areas.

In his keynote address, Don Gotterbarn drew these perspectives together. He explained that sometimes, "Software is considered to have failed even though it was produced on schedule within budget and met the customer's specified software requirements. Software has been developed which, although meeting stated requirements, has significant negative social and ethical impacts. The Aegis radar system, for example, met all requirements that the developer and the customer had set for it. The system designer's did not take into account the users of the software nor the conditions in which it would be used. The system was a success in terms of budget, schedule, and requirements satisfaction, even so, the user interface to the system was a primary factor in the Vincennes shooting down an Iranian commercial airliner killing 263 innocent people."

He suggested that, "There are two factors that contribute to these professional and ethical failures. There is significant evidence that many of these failures are caused by limiting the consideration of relevant system stakeholders to just the software developer and the customer. This limited scope of consideration leads to developing systems that have surprising negative affects because the needs of relevant system stakeholders were not considered. In the case of the Aegis radar system the messages were not clear to the users of the system operating in a hostile environment. These types of failures also arise from the developer limiting the scope of software risk analysis just to technical and cost issues. A complete software development process requires the identification of all relevant stakeholders and broadening the risk analysis to address social, political, and ethical issues. Software development lifecycle methods include a risk analysis process but with current methods limit the types of risks considered. The risk analysis is primarily instrumental-addressing corporate bottom lines. Software projects have ethical dimensions that need to be identified before and during the development process."

Clearly there is a need to provide processes and tools to address such issues in the development cycle but that is only half the solution. There has to be a willingness to use such facilities in order to address these broader societal issues. This requires our future professionals to be educated in such matters. The introduction of civics into schools' curriculum would provide the necessary foundation on which to build appropriate elements into higher education programmes designed to produce the computer professionals of the future. In their paper, Eva Turner and Paula Roberts concluded that, "...ethics should be part of the training of both the computing professional and the general user, if the working culture of the computer industry, and society's passive acceptance of computers is to be changed." They argued that the topics covered "... must include such important issues as gender, race, disability and culture". They suggested that this is an ongoing process of education and that, "Developing IT technologies will present professional and user alike with the need to continuously adapt to new ways of working and living with computers. Alongside this lifelong flexibility must be the ethical skills to critically evaluate the newly developed technologies on societies."

The stark reality of technological influences on society was illustrated by a case study presented by Helen and Kate Richardson. Their paper catalogued " the rise and rise of

call centre in the North West of England, UK and their use of [Customer Relationship Management] CRM systems. CRM implies new technologies and new ways of working." They discovered that there were "...some inherent contradictions in terms of privacy, communication richness, management methods and computer ethics ..." in using CRM systems. They pointed out that, "Call centres today are often viewed by some as offering satisfying employment of intrinsic value, for others, they are the 'new sweatshops of the 21st century'." The clear message from this case study is just how vulnerable certain sections of society are to technologically supported exploitation. In his closing remarks to the delegates of the conference John Weckert explained that situations such as this called for professionals to properly consider issues of equality and justice, freedom of speech and informed consent. They need to subscribe to the notion of responsibility and duty of care when developing systems for society.

The message is simple. An inclusive information society needs an infrastructure built upon systems which are in harmony with all citizens.

Further details of all papers presented at ETHICOMP 2001 can be found at: (<http://www.ccsr.cse.dmu.ac.uk/conferences/ccsrconf/ethicomp2001/index.html>)

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