Advanced Technologies for Peace Operations

The application of advanced technologies to the field of peace operations offers considerable potential benefits to the UN. In many cases, new technologies would enhance the UN`s effectiveness on the ground and its capability to react more rapidly to crisis. In other cases, there is substantial potential to reduce the costs of peace operations, by using technology in the place of personnel deployments. In broad terms, the types of technologies which could play a greater role in peacekeeping operations are: surveillance technologies, communications equipment and enhanced information management systems. Each category offers significant long-term potential to improve the UN's ability to carry out advanced planning and to establish an operation on the ground quickly.

To some extent, advanced technologies have already been applied successfully to peace operations. Aerial surveillance technologies were used in UNEF, and both fixed and rotary-wing aircraft have provided this service in several missions since the 1950s. Ground-sensor systems have also been used on occasion, such as in the non-UN Multinational Force and Observers in the Sinai. Current state-of-the art technologies far exceed these earlier techniques and offer substantial advantgages to the UN. The use of AWACS technology has demonstrated its utility in the area of monitoring no-fly zones in the former Yugoslavia, and analogous capabilities are available for maritime operations. An attractive technology for a variety of peace operations is aerial reconnaissance of ground activity. Access to satellite capability through national means and by way of private sector cooperation may have great strategic potential and could prove crucial to a properly functioning early-warning system.

At the operational and tactical levels, Joint Surveillance Target Attack Radar System (J-STARS) technology would be a key asset for Heads of UN Missions and Force Commanders. The technology available today would permit Force Commanders to have access to satellite imagery in real time. The ability to locate, identify and monitor virtually all vehicular movement throughout a theatre of operations has obvious applicability to monitoring, surveillance and control missions. Such a capability could be augmented through more extensive use of a wide range of portable ground sensor systems, including night vision equipment.

The right combination of communications and information management technologies represents an indispensible component of reliable, effective command and control systems. Command, Control, Communications, Computer and Intelligence systems (C4I) would incorporate the full range of strategic and tactical communications networks, together with data processing capabilities and real-time information transfer. Most such "packages" are available with a number of training and simulation programs which would greatly strengthen the UN`s ability to develop training programs and conduct widely-dispersed training sessions. A training system linking the growing network of national peacekeeping training centres to the UN and national units could be instrumental in this process.

Advanced technologies cover a multitude of fields, and their potential applications to peace operations would need careful evaluation on a case-by-case basis. However, they have the potential to affect the work of the UN system at every level studied in this report. For example, communications and other technologies which assist in early