

of ICAO Member States, is now in its implementation phase. This major task includes the development of standards, recommended practices and guidance material which will be applied well into the 21st century.

The new global navigation satellite system (GNSS), which is being established under the proposals of the FANS Committee of ICAO, is currently made possible through the satellites in the global positioning system (GPS) of the United States, as well as the global orbiting navigation satellite system (GLONASS) of the Russian Federation.

However, consideration is being given to a long-term solution which could conceivably include satellite systems owned and controlled by the wider international community rather than by a limited number of States.

The surveillance system will make use of automatic dependent surveillance (ADS), which will

enable aircraft to transmit their positions, with rather remarkable precision, to air traffic control centres. This and other data from the aircraft will appear on electronic displays rather than having to be transmitted orally from the cockpit and written down by air traffic control officers.

The improvement in the communications, navigation and surveillance system will, in turn, result in improvements in air traffic management. With the increased speed and reliability of information, airspace, including airspace in the airport area, could be used with greater flexibility and economy.

For the new system to be meaningfully implemented, there is need for a global and coordinated, rather than a haphazard, approach. However, there is room for different countries and different regions to phase in the new technology at different rates.

The new system is not as costly as it may sound. In fact, in 1988, the

FANS Committee estimated that globally it would cost no more than existing systems and should provide benefits calculated at US \$55 billion annually. Estimates done by some individual States suggest that the benefits to those States could exceed cost by as much as three to one.

Qualitative benefits include the maintenance and improvement of safety even with traffic growth, the provision of CNS services in a more cost-effective manner, and the management of air traffic in a way that provides more efficient use of aircraft and airspace capacity and permits the harmonious treatment of flight transiting all airspaces.

Some countries, including certain developing ones, will share another potential benefit. Namely, leapfrogging from the present outdated system to the new satellite technology in the management of their airspace. Nonetheless, the need to help developing countries has been noted by ICAO Member States.

The technology can be custom-ordered to suit the needs of any one country. For example, it is expected that States with a large and busy airspace will introduce all elements of the new CNS/ATM plan. States with smaller airspace could choose from the larger menu of options in designing their systems.

All States, however, have recognized the need for continued leadership by ICAO in the further development and implementation of the system. And one of the matters the Organization has under consideration is the kind of mechanism that would be required for the coordination of the process and the provision of assistance to States requiring such assistance.

