

MANPOWER DEVELOPMENT IN INDONESIA TOWARD GEOMATICS QUALIFICATIONS AND CERTIFICATION OF PERSONNEL

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ABSTRACT

A Indonesian Geomatic Council (IGC) has been set up as a normative body by various professional organizations and industries in the field of geomatics with one of the objectives to prepare the standard of professional competence in the era of global market. This paper presents the activity of IGC and its cooperation with other international professional organizations for manual recognition and accreditation.

The coverage of Telkom-1 satellite is shown in Figure 1. The satellite has a range from 5925 - 6425 MHz for uplink and 6445 - 6705 MHz for downlink. The downlink range are from 3700 - 4200 MHz for extended the service area and 3400 - 3660 MHz for extended the service area.

Telkomnet Turbo is a relatively low cost solution with high rate. It provides a high rate of data transfer. Moreover, the simplicity and ease of use of the terminal makes it easy to be implemented in various environments.

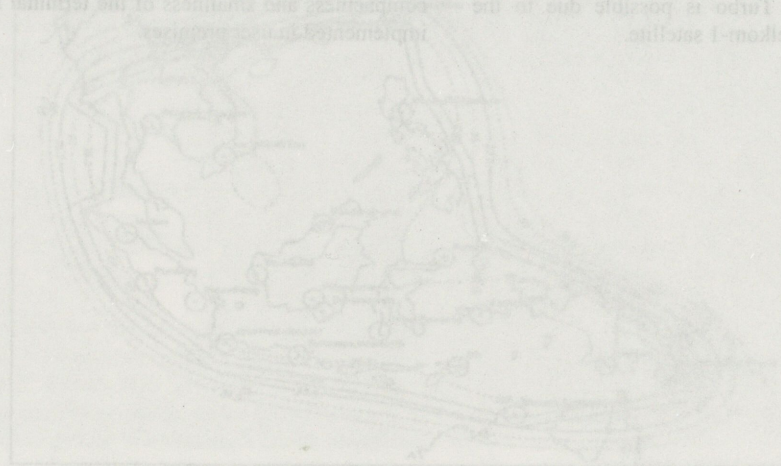


Figure 1: TELKOM-1 antenna coverage

band. The number of channel is doubled using polarization diversity, which are linear polarization for both horizontal and vertical polarization. Each channel, having a 36 MHz bandwidth, channel of identical polarization are separated by 40 MHz giving a 4 MHz guard band, and channel of opposite polarization are separated by 20 MHz.

3. TELKOMNET TURBO

The powerful satellite like Telkom-1 make it possible to deliver the transmission using smaller receive antenna as low as 1 meter diameter of antenna. This small dish can be easily mounted in

price of it is quite inexpensive. Telkomnet Turbo is a service access via satellite for multimedia purposes based on TCP/IP with higher rate. The characteristic of Telkomnet Turbo are as follows:

- Access Mode : One way asymmetric

- Rate (down/up rate) : up to 400 kbps
- Terminal
 - 90 - 120 cm elliptical antenna plus LNB
 - 32 bit PCI card
 - windows 95 or NT operating system
 - PC (min) Pentium 75, 16 MB RAM, modem

The network architecture of Telkomnet Turbo is depicted in figure 2. The flow of information is first by using dial-up network to access and gives some instructions/commands to the Network Operation Control (NOC). Then, the signal is amplified by the satellite and transmitted to a receiving terminal which then amplified using low noise amplifier and converted to L-band, and inputted to the PCI card to do the demodulation of the signals. Since the amount of instructions/commands from a user is small and the information be pulled-out from the server or web-site is quite large, the asymmetrical approach is the most suitable architecture.