GOVERNMENT OF INDIA
COMMUNICATIONS AND INFORMATION TECHNOLOGY
LOK SABHA

UNSTARRED QUESTION NO:2527
ANSWERED ON:04.12.2002
NORMS FOR VOIP
VARKALA RADHAKRISHNAN

Will the Minister of COMMUNICATIONS AND INFORMATION TECHNOLOGY be pleased to state:

(a) whether Telecom Regulatory Authority of India (TRAI) has finalised any norms for Voice Over Internet Protocol services (VOIP);

(b) if so, the details thereof; and

(c) the details of the companies which are providing VOIP services in India?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF COMMUNICATIONS AND INFORMATION TECHNOLOGY (SHRIMATI S MAHAJAN)

(a) Yes, Sir.

(b) The details are given in the annexure.

(c) M/s DATA Access India Ltd. is deploying VOIP for providing International Long Distance (ILD) services under their ILD licence.

ANNEXURE

Quality of Service Benchmarks for International Long Distance (ILD) networks engineered by employing VoIP technology

End-to-End Quality of Service (QoS) Parameters

The ILD segment of the network will be engineered to meet the folowing end-to-end service quality parameters:

Toll Quality Networks:

- MOS (4 or R-value of 80 or higher
- One-way end-to-end delay (150 ms
- Packet loss not to exceed 0.1%
- Jitter should not exceed 5 ms
- Transparency to DTMF tones
- Services covered in addition of voice to include: G3 Fax; voice-band modem @ 14.4 kbps or higher

Below Toll quality Networks:

- MOS (3 or R-value of 70 or higher
- One-way end-to-end delay (400 ms
- Packet loss not to exceed 2%
- Jitter not to exceed 10 ms

Legend:

MOS : means Mean Opinion Score, a subjective measure of speech quality as defined in ITU-T Recommendation P.800, `Methods for Subjective Determination of Transmission Quality, August 1996`

R-Value : is the objective measure of speech quality denoted as the resultant value of the `Transmission Rating Factor` as defined in ITU-T Recommendations G.107, `E-Model, Computation Model for Use in Transmission Planning, August 2001` and G.108, `Application of the E-Model, A Planning Guide, September 1999`.

DTMF : Dual Tone Multi Frequency

Ms : milli second