**Third Party Evaluator's Opinion on**
**Telephone Network Expansion Project**

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**Relevance**

During the 1980s, the Thai economy grew rapidly with double digit GDP growth for several consecutive years. With influx of foreign direct investments along with growth in domestic and international trades as well as rapid rise in per capita income, the need for an adequate telecommunications (at the time, fixed telephone services) infrastructure both in terms of meeting huge number of unmet demands (backlog) and in upgrading poor service quality was extremely pressing in order to sustain the country's economic and social development momentum.

With waiting list growing rapidly from 300,000 in the mid 1980 to over one million mark in 1990, this project, set to expand and modernize transmission system and local cable networks, is thus most relevant and timely. The optical fiber network in Bangkok Metropolitan Area (BMA) and the transmission system in the provincial area were needed to meet the rapid increase in call traffic in the 1990, from both the 4.1 million lines which were added to TOT's fixed line network nationwide and from the new cellular phone networks, arising from BTO concessions agreements given by TOT and CAT in the early 1990. Additionally, the above transmission network together with the nearly 3.9 million pairs of local cable network was instrumental in upgrading service quality with improved audio quality, better successful connections, and lower failure rates. They are also instrumental in providing a modern "access network" necessary to allow telephone users to connect to the Internet, and in the immediate future, to new Broadband Internet (ADSL) service.

The Ministry of Information and Communication Technology (MICT) has set a target of one million broadband Internet users by 2004, the project can be viewed as relevant even today. One observation here is that, while the project (undertaken from 1987-1994) has succeeded greatly in meeting the rising demand of users in the BMA where waiting list there had declined from 1.3 million in 1993 to about a mere 20,000 in 2003, little attention was given to the provincial area, resulting in the further widening of the digital-divide gap between BMA and the rest of the country where currently the provincial area has an unmet demand of nearly 560,000 in waiting-list. Future projects of this kind could perhaps address the problem of a more equitable service provision to the rural area.

**Efficiency**

Overall, the project was able to exceed the originally planned scope of work, while simultaneously completed in time and at lower costs than projected. In all account, the length of optical fiber network built was extended by 32%, the number of local cable pairs by 41%, and the number of sections of long-distance transmission spans by 52%, while the actual entire project costs were 70,322 million yen (according the evaluation report), or 55% lower than the projected (planned) costs of 154,797 million yen. Two major reasons were identified in the evaluation report. One is the appreciation of yen against Thai baht (averaging about 18% between 1986-1993 against the actual rate in 1987). The other is due to a more transparent process of competitive bidding which should be the bigger contributor to the cost saving.

One other significant factor may be added as well. It arises as a result of economy of scale of the project. In 1984 or 30 years since the establishment of TOT, the total line capacity was a mere 0.57 million lines, increasing to 1.68 million in 1990. It can be observed that if based on past expansion projects of much smaller scale of say, 300,000 lines, the planned cost would be much

higher. Consequently it is probably the combination of the more transparent process of competitive bidding used, together with the economy of scale and scope of the project that contributed the most to the overall efficiency of this undertaking. This could be one key lesson learnt for future projects of this kind.