

Telecommunication Origin Identification

THERE ARE VARIOUS WAYS to determine which phone number, network, operator or country a message is coming from. Through the telecommunication origin identification (TOI) system, it is possible, for example, to authenticate who has access to a service, find the caller's location, or trace malicious calls. The system allows "call-back" services to be provided, and for calls to be logged for accounting purposes.

TOI technology is also important in providing emergency services. However, the system is hampered, not only by criminals wanting to hide their traces, but also when information on a message's origin is suppressed for commercial reasons.

It has been proposed that a provision should be added to the International Telecommunication Regulations (ITRs) to ensure that operators show the number of who is calling, as far as practicable and subject to national laws on the privacy of data. An ITU technical standard (ITU-T E.157) provides general principles for revealing callers' numbers and their origins.

MISUSE OF TELEPHONE NUMBERS

Some service providers might misuse phone numbers to inflate their revenues. A common form of misuse is called "short stopping." Calls are routed through a high-cost destination abroad, when they are in fact terminated within a caller's own country. Thus, consumers face excessive charges, typically when connecting to "premium services" such as competitions. And if operators try to block this practice, it can interfere with legitimate access to phone numbers in the foreign country that is on the route.

Some types of misuse are not currently illegal in all countries, and it has been proposed that a provision should be added to the ITRs making it mandatory for administrations to take measures against misuse of telephone numbers.

ALTERNATIVE CALLING PROCEDURES AND VOIP

Review of the ITRs might also include discussion of how new technologies have altered the way that many people make phone calls, and whether regulation is appropriate.

Traditionally, to connect an international phone call, national telecommunication carriers would exchange circuit-switched call minutes through settlement procedures, with consumers paying higher rates for international direct dialing. In the 1990s, however, the system began to be undercut by international call-back services and other "alternative calling procedures." And the advent of Voice over Internet Protocol (VoIP) or "Internet telephony" generated a market that by-passes circuit-switched international calling.

These changes have had profound effects. For consumers, they have generally delivered lower prices. But operators have seen their earnings diminish, also leading to lower tax revenues for some governments. One consequence can be reduced finance for infrastructure development.

Should alternative calling procedures be encouraged, tolerated, discouraged or prohibited? What can governments, operators and ITU do to protect networks, boost international calling and avoid regulatory chaos? In December 2012, the World Conference on International Telecommunications might debate these issues as it reviews the ITRs.