



(TS//SI) Telecomm Customers Can Now Pick Their Own Phone Numbers -- What Does It Mean for SIGINT?

FROM: [REDACTED] Target Technology Trends Center (S3TSD),
and SIGINT Communications
Run Date: 10/28/2004

New trend makes it impossible to tell where the communicants are located -- major implications for SIGINT collection (TS//SI)

(TS//SI) Did you know that people who live in other countries can have a U.S. phone number? In fact, people can now choose any phone number they wish, regardless of where in the world they live. This phenomenon, known as Pick-Your-Own-Number (or PYON) has some major ramifications for SIGINT collection.

(C//SI) Although traditional phone lines are still operating on a country-based telephone numbering system, VoIP (Voice Over Internet Protocol) services are not. This means that VoIP service providers (e.g. Vonage, FreeWorld Dialup, Packet8, etc.) can allow users to pick their own number, usable anywhere. Such services have experienced skyrocketing popularity in recent years: for example, Vonage had 7,700 subscribers at the end of 2002; by May 2004, it had 155,000 subscribers, and was adding 20,000 new subscribers a month! In addition, traditional telephone companies like AT&T and Verizon are now offering VoIP services.

(U//FOUO) PYON services generally use Session Initiation Protocol (SIP), and require a high-speed internet connection, plus either 1) an analog telephone adapter, 2) a SIP phone, or 3) a PC/laptop. Beyond that, however, "pick-your-own number" services operate differently from provider to provider - one solution does not fit all. Most providers allow customers to have an unlimited number of "virtual" phone numbers, of mixed area and country codes.

(TS//SI) So what does all this mean for collecting SIGINT? With mobility and phone services available today, **the location of a target can no longer be reliably determined based on the phone number** -- a fundamental change. (Theoretically, Osama bin Laden could be using a U.S.-based number while located in Afghanistan!) This, in turn, **complicates collection** because of USSID-18 prohibitions on targeting U.S. communications... how can it be determined if the target is in the U.S. or abroad? And even if the target is known to be abroad, VoIP may fall into a gray area due to the U.S. location of servers and numbers.

(TS//SI) The FBI and FCC have mandated that the Communications Assistance for Law Enforcement Act (CALEA) be expanded to include Internet services, including VoIP. CALEA states that telecommunications providers must enable wiretapping by law enforcement agencies. Such activities are outside of NSA's charter, but we may have an opportunity to partner with law enforcement -- i.e. the FBI -- on collection, selection, filtering, and analysis. In addition, some commercially available products have recently been launched to help VoIP providers comply with CALEA. Many regulatory issues still have to be resolved, both in the United States and abroad.

(TS//SI) In short, Pick-Your-Own-Number voice over IP has the potential to change the way that we communicate, and will definitely change how NSA does business.

(TS//SI) For more information on this subject, see the following:

Target Technology Trends Report on "Pick Your Own" Voice over IP Services by [REDACTED], T3C [REDACTED], and [REDACTED]

Technical Report "Pick Your Own Phone Number" VoIP Services by [REDACTED], R/SRP [REDACTED]

[Media over IP Page: "go mop"](#)

"(U//FOUO) SIDtoday articles may not be republished or reposted outside NSANet without the consent of S0121 ([DL sid comms](#))."

DYNAMIC PAGE -- HIGHEST POSSIBLE CLASSIFICATION IS
TOP SECRET // SI / TK // REL TO USA AUS CAN GBR NZL
DERIVED FROM: NSA/CSSM 1-52, DATED 08 JAN 2007 DECLASSIFY ON: 20320108