

# Researchers show how to use mobiles to spy on people

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(PhysOrg.com) -- Researchers have demonstrated how it is possible to use GSM (Global System for Mobile communications) data along with a few tools to track down a person's mobile phone number and their location, and even listen in on calls and voicemail messages.

Independent researcher Nick DePetrillo and security consultant Don Bailey demonstrated their system at the SOURCE Boston security conference earlier this week. Using information from the GSM network they could identify a [mobile phone](#) user's location, and they showed how they could easily create dossiers on people's lives and their behavior and business dealings. They also demonstrated how they were able to identify a government contractor for the US [Department of Homeland Security](#) through analyzing phone numbers and caller IDs.

Bailey and DePetrillo's demonstration showed up inherent weaknesses in

the way mobile providers expose interfaces to each other to interoperate over the GSM infrastructure. They used the Home Location Registry (HLR) and GSM provider caller ID database, along with some of their own tools and voicemail-hacking techniques.

Their technique was to first obtain their victim's mobile phone number from the ID database, and they used an open-source PBX program to automate phone calls to themselves, which triggered the system to force a name lookup. They could then associate the name information with the phone number in the caller ID database. Their next step was to match the phone number with the location using HLR, which logs the whereabouts of numbers to allow networks to hand calls off to each other. Individual phones are logged to a register of mobile switching centers within specific geographic regions. DePetrillo said he was even able to watch a phone number moving to a different mobile switching center, regardless of where in the world they were located.

The pair were even able to track a journalist who interviewed an informant in Serbia and then traveled back to Germany, and they also obtained the informant's phone number. DePetrillo said it was also a simple matter to access voicemail without the phone ringing by making two almost simultaneous calls; the first disconnects before it is picked up, and the second goes into voicemail.

The researchers have not released details of the tools they developed, and have alerted the major GSM carriers about their results. Bailey said the carriers were "very concerned," but mitigating these sorts of attacks would not be easy. In the meantime there is little mobile phone users can do to protect themselves short of turning off their phones. Indications of an attack might include the phone calling itself, or the phone suddenly calling someone by itself, but most attacks would produce no signs visible to the phone user.

DePetrillo said some of their research scared them, since they were able to track important people who were themselves protected by high security measures by tracking people close to them, such as congressional aides, who were not under high security. He also said the attacks they demonstrated could be made on corporations as well as individuals, and corporations would be well advised to look at the [security](#) policies they have in place, especially for their executives.

Bailey said their system is not illegal and does not breach the terms of service.

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