The arrests were the result of a 6 week investigation by the Secret Service and the Mount Lebanon police. The police were tipped off by parents who were suspicious about how their son managed to obtain a skateboard valued at \$140.

The Secret Service was also involved in investigations that led to the arrests of several hackers in San Francisco and New York last July.

Secret Service spokesman William Corbett says that although some reports have portrayed the hackers as part of a national crime ring, the cases are unrelated. "It's just that a few of these computers hacking cases came to a head at about the same time," he says.

Federal Legislation enacted in 1984 gives the Secret Service, part of the Department of the Treasury, a major role in investigating computer crimes. Under the federal Computer Fraud and Abuse Act of 1986, computer fraud is a felony that carries a maximum penalty of 5 years for the first offense, and 10 years for the second. Displaying unauthorized passwords on hacking bulletin boards carries a maximum penalty of 1 year in prison for the first offense, and 10 years for the second.

German Teens Crack NASA

Washington, D.C. -- A group of West German teenagers from the Chaos Computer Club penetrated a NASA network recently, saying they were doing it to "test the security."

What they got into was SPAN Net, a computer network with about 700 notes, which is actually based at the Goddard Space Center in Maryland. All that's in there is unclassified data, space science information, and post-flight data analysis. "Anyone with NASA related research can apply for access to SPAN" says a spokesman, who adds that the network runs on DEC VAX hardware. "We picked up three attempts to gain access and put in security precautions so it wouldn't happen." His personal opinion is, "We're happy that they couldn't get back in, and decided to go public." He also added that NASA has many other networks, many of the classified and "probably impenetrable. But I do not want to challenge anybody."

How'd they get in? Probably they got a West German NASA licensee, which gave them a visitor's pass, then they created new passwords with unlimited security for themselves, after which getting around the network was easy.

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Switching Systems

There are currently three different forms of switching systems that are present in the United States today. Step by Step (SxS), Crossbar, and the Electronic Switching System (ESS) make up the group. Phreaks have always been a little tentative when it comes to "doing their work" once they have heard about effects of switching systems on their hobby. After researching this topic, I have found that there really is not that much to be worried about. Read on, while I share with you information which I have compiled about all of these switching systems and their distinct features.

The first switching system that was used in the country was called Step by Step. This was adopted in 1918 by Bell, and until 1978, they had over 53% of all their exchanges using Step by Step (SxS). This system is known for it's long, confusing train of switches that are used for its step by step switching.

Step by Step has many disadvantages to phone users. The switch train becomes jammed fairly often, and it causes calls to be blocked. Also, SxS does not allow the use of DTMF dialing. This accounts for some of the areas in the United States that cannot have touch tone dialing abilities. A tremendous amount of electricity and maintenance needs to accompany the SxS switching system, which makes it even more impratical. All in all, this is probably the most archaic switching system around.

There are a number of ways to see if you are on SxS. You will notice that there are no pulsing digits after dialing. Most sources say that the phone company will sound like many typewriters. SxS does not offer features such as speed calling, call forwarding, three-way calling, call waiting, and other such services. Pay phones on SxS also will want your money before you receive a dial tone. This adds to the list of disadvantages labeled to that of the Step by Step switching systems.

Another type of switching system that is prevalent in the United States is Crossbar. Crossbar has been Bell's primary switcher after 1960, and three types of it exists. Number 1 Crossbar (1xB), Number 4 Crossbar (4xB), and the Number 5 Crossbar (5xB). In Crossbar, a switching matrix is used for all the phones in an area, and when someone calls, the route is determined and is met up with the other phone. This matrix is set-up in horizontal and vertical paths. Unlike other switching systems, in my research, I could not come up with any true and definite distinguishing features of the Crossbar switching systems.

The Electronic Switching System (ESS) is yet another switching system used in the United States and the most used of all three switching systems. ESS is an extremely advanced and multi-faced type of switching system, and is feared by marauders of the phone company everywhere. With ESS, your phone company is able to know every digit dialed (including mistakes), who you call, when you called, and how long you were connected. ESS is also programmed to print out the numbers of people who make excessive calls to WATS numbers (800 services) or directory assistance. This feature of ESS is called 800 Exceptional Calling Report, and has spelled the end of some forms of continuous code hacks to certain extenders. ESS can also be programmed to print logs of who called and abused certain numbers as well. Everything is kept track of in its records.