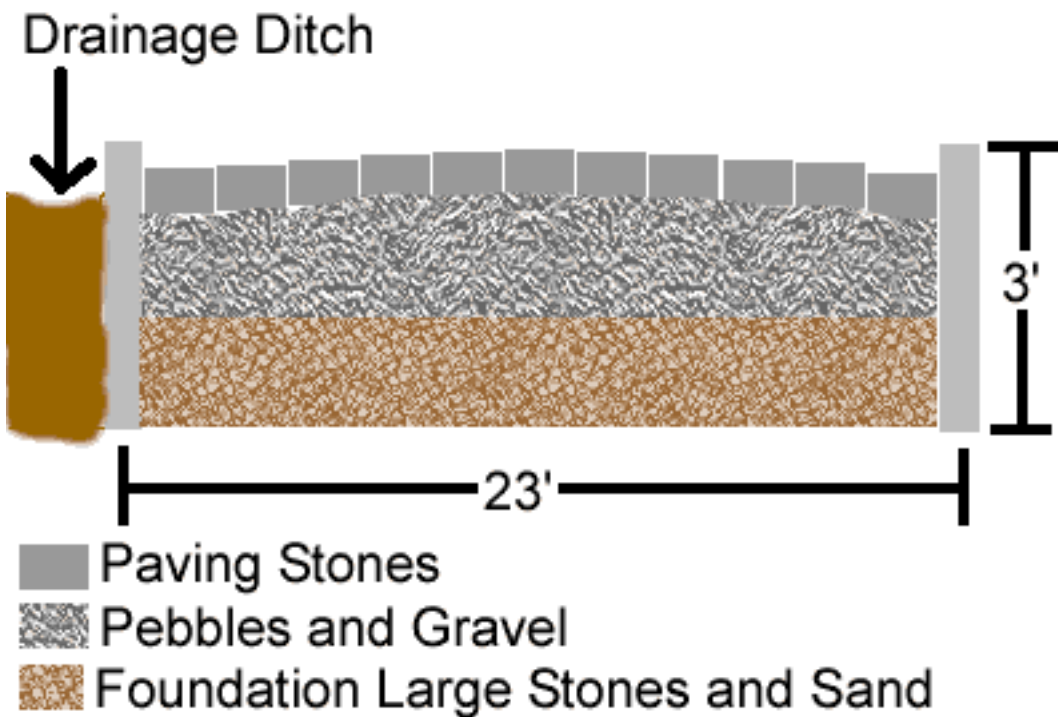


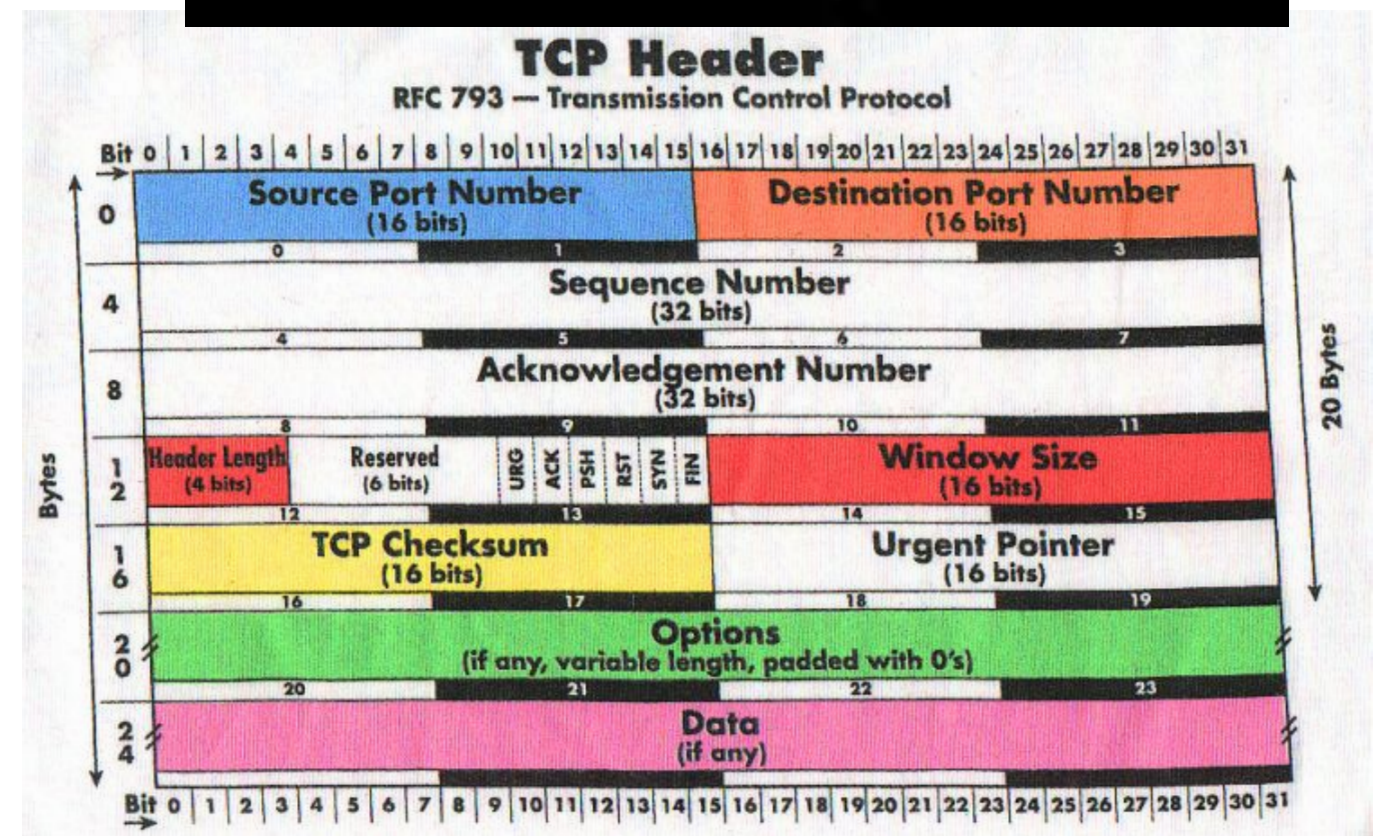
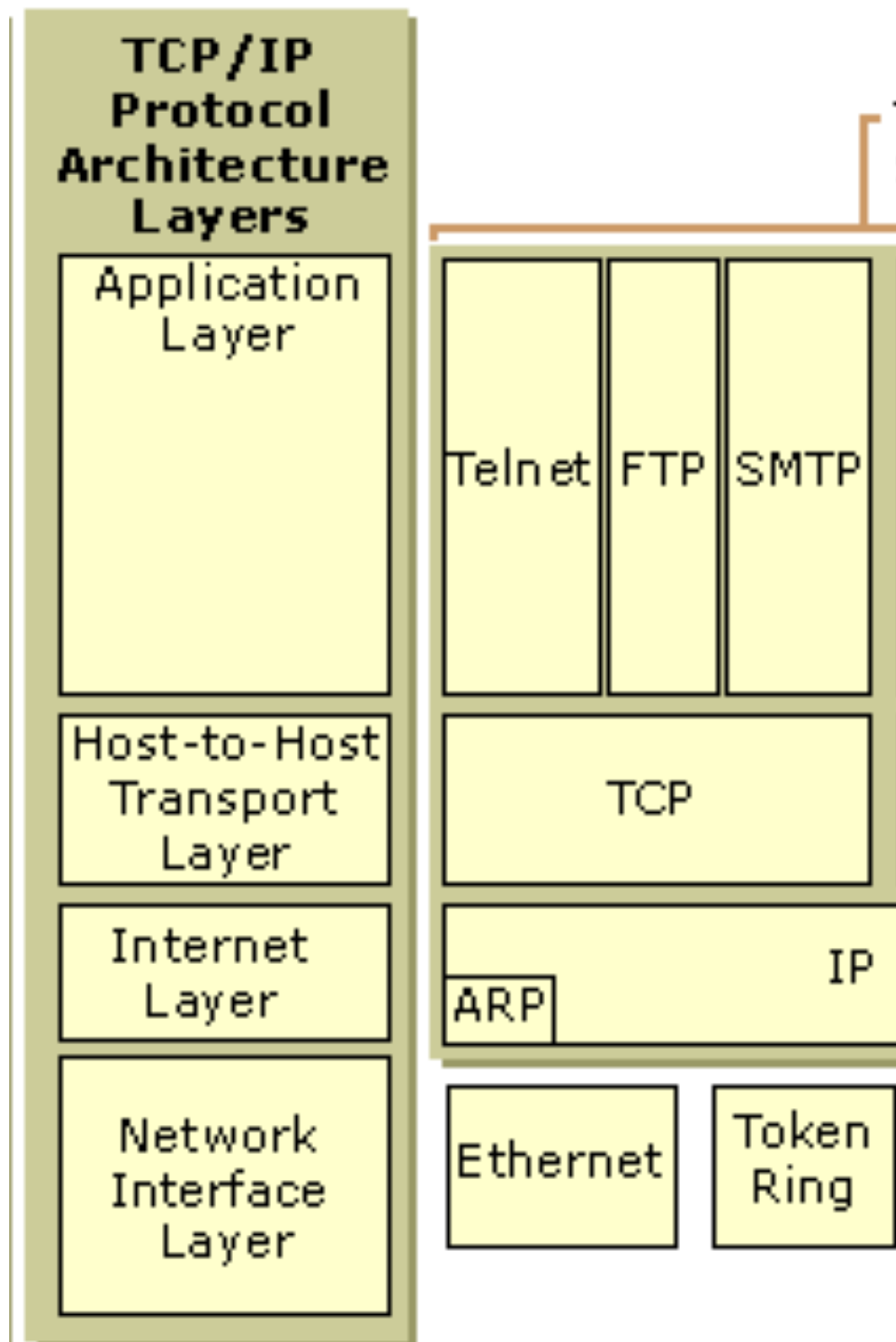
Thoughts on Internet Security

Yangsheng Wang

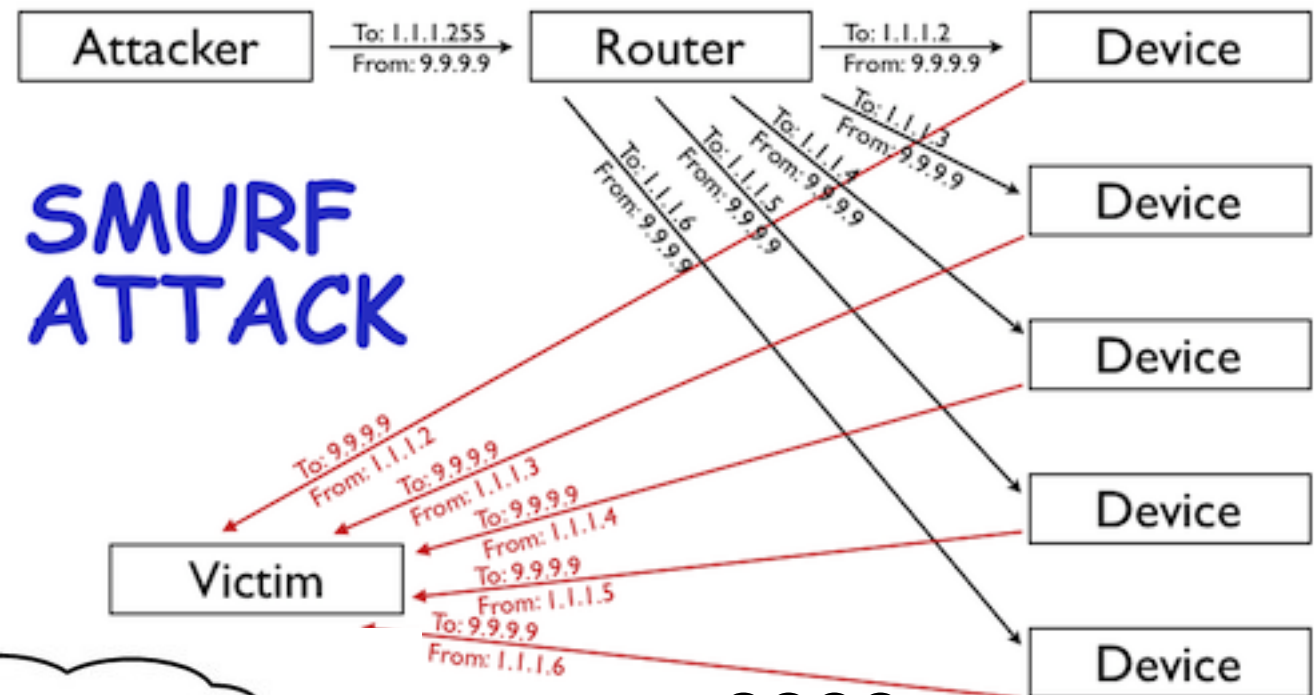
Roman Roads



Internet - kind of a modern day road



Simple and Clever Attacks



2000

```
A problem has been detected and windows has been shut down to prevent damage
to your computer.

DRIVER_IRQL_NOT_LESS_OR_EQUAL

If this is the first time you've seen this Stop error screen,
restart your computer. If this screen appears again, follow
these steps:

check to make sure any new hardware or software is properly installed.
If this is a new installation, ask your hardware or software manufacturer
for any windows updates you might need.

If problems continue, disable or remove any newly installed hardware
or software. Disable BIOS memory options such as caching or shadowing.
If you need to use Safe Mode to remove or disable components, restart
your computer, press F8 to select Advanced Startup Options, and then
select Safe Mode.

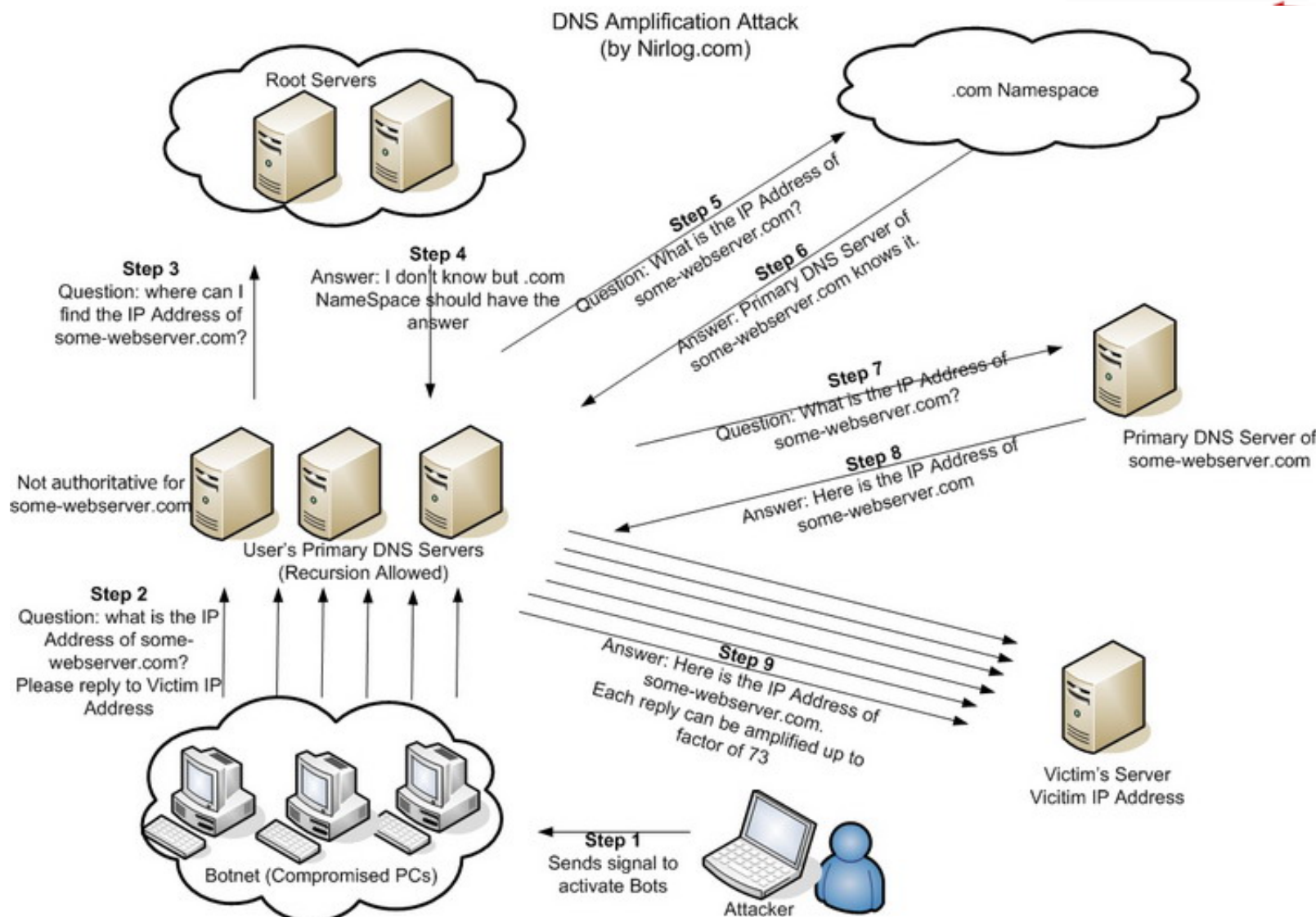
Technical information:

*** STOP: 0x000000D1 (0x0000000C, 0x00000002, 0x00000000, 0xF86B5A89)

***      gv3.sys - Address F86B5A89 base at F86B5000, DateStamp 3dd991eb

Beginning dump of physical memory
Physical memory dump complete.
Contact your system administrator or technical support group for further
assistance.
```

Blue Screen of Death
1995



2013

Defense Strategy

- **Perimeterizing vs de-perimeterizing**
- **Layered defense mechanisms: preventative, detective, and responsive**
- **Intelligence gathering and correlation - Big Data problem**

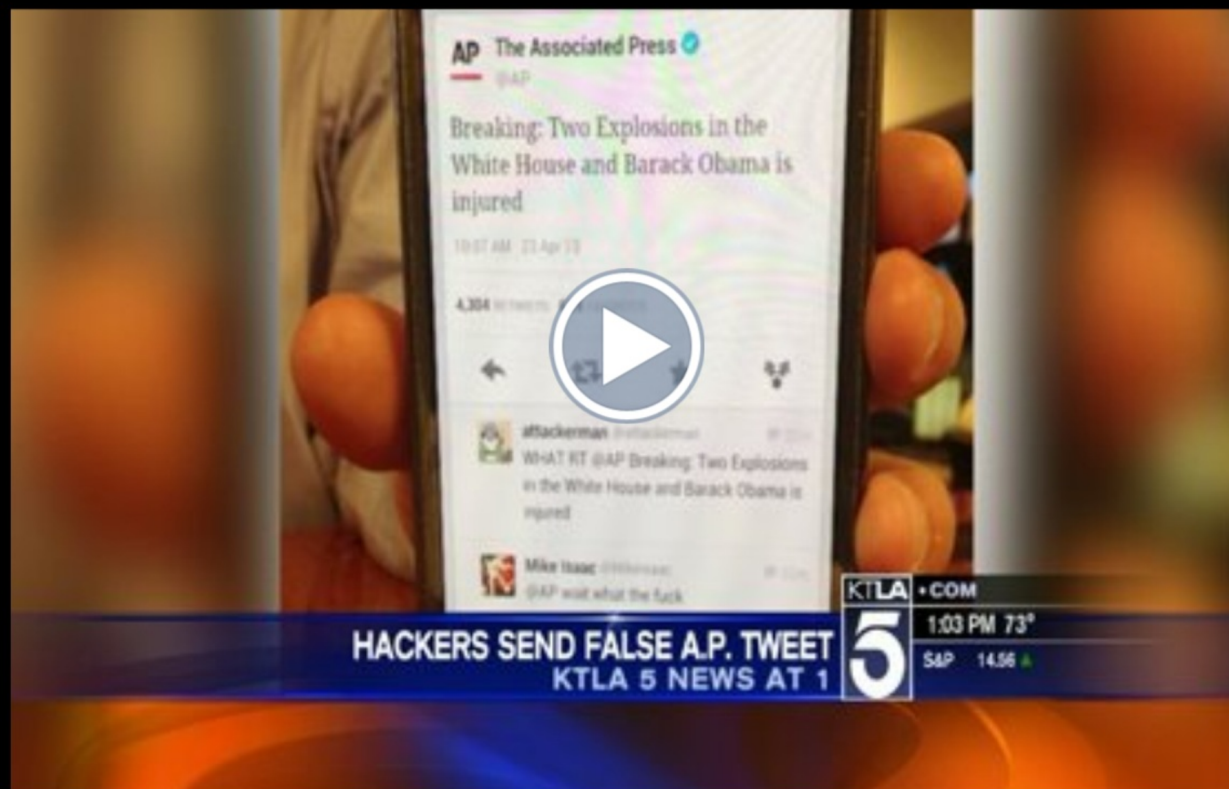


Advanced Persistent Threat



AP Twitter Hack and "Flash Crash"

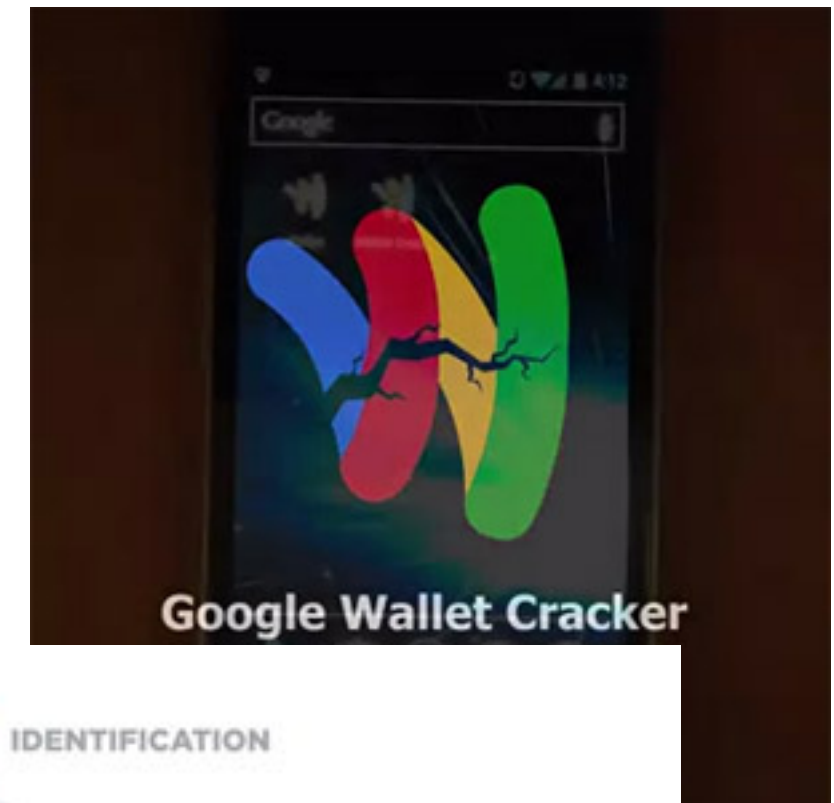
AP Twitter Hacked, Sends False Report of White House Explosions
KTLA - Los Angeles 4/22/2013



A tweet by the nation's largest newswire about a catastrophe at the White House was nearly immediately shot down as Tuesday.



The future of mobile, social, and cloud....



Evolution of Technology

