EMP, ElectroMagnetic Pulse

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EMP was discovered as being a side effect of a nuclear explosion. On a ground based explosion the EMP effect aren't so clear cause the other effect or much more destructive. But on high altitude (400 Km) the only effects that reach the earth are the ElectroMagnetic waves. On this height the effects of the EMP can be felt on an area as big as North America or the entire continent of Europe.

Here is a text that describes the effects :
One of our earliest experiences with HEMP dates back to the resumption of atmospheric nuclear testing in 1962 following a three year testing moratorium. Starfish Prime, a 1.4 megaton device, was detonate at an altitude of 400 kilometers over Johnston Island. Failures of electronic systems resulted in Hawaii, 1,300 kilometers away from the detonation. Street lights and fuses failed on Oahu and telephone service was disrupted on the island of Kauai. Subsequent tests with lower yield devices produced electronic upsets on an instrumentation aircraft that was approximately 300 kilometers away from the detonations.

Nuclear bombs aren't the only devises that can create a EMP. There are electromagnetic bombs and Radio-frequency (microwave) weapons.
Some of these weapons can be tuned to attack just a small area, like one building.

There groups have these kinds of weapons and are using them to blackmail companies. Like : "*You pay us this amount or we'll destroy all computers in your offices.*

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We know that there have been groups like this in the USA, and I'm sure there will be groups in Europe and the rest of the world sooner or later.

Defense, protection of EMP

It's hard to protect electronic devices from a EMP. The theory is based on the principle of the *cage of faraday*

(A closed box made of metal). And it makes a device around 50% more expensive.
Magnetic storage devices, like harddisk, diskettes, tape backups, ... are also vulnerable to EMP. But cd's and dvd's are not. So if you need to store date (for a long time) use cd-r and dvd-(+)r.

Links :
For more information.

* http://www.globalsecurity.org/wmd/library/report/1988/CM2.htm

* http://www.geocities.com/CapeCanaveral/5971/emp.html