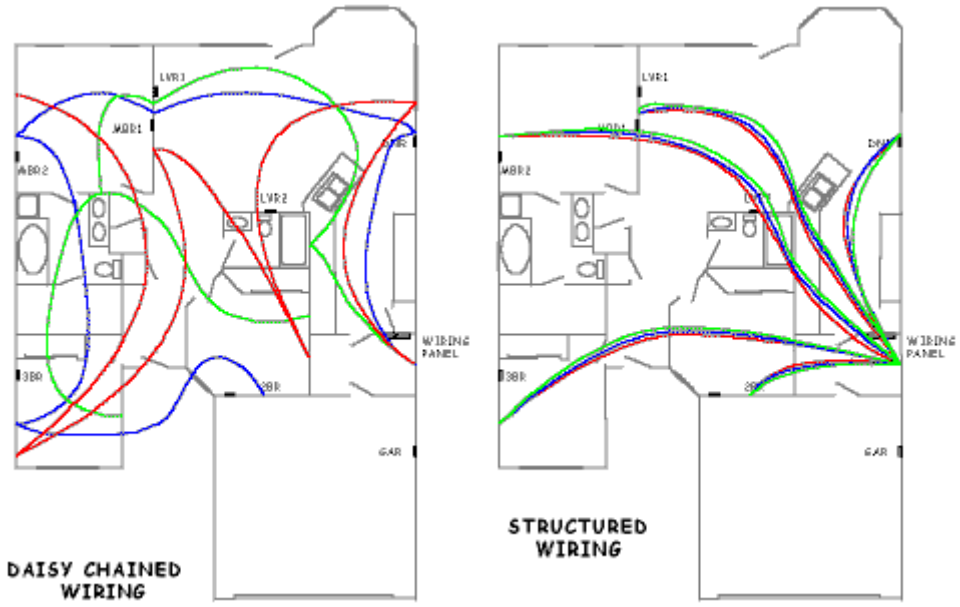
Structured Wiring

In one sentence Structured Wiring can be described as combining ALL of the communications wiring in your home and treating it as one wiring system. This can include wiring for a home network, telephone, video, audio, alarms, infrared remote control and much more.

Structured Wiring is very different than the older way of doing things.



On the left is the older 'Daisy Chained' method of wiring, if you can go as far as calling it a method. Cables would be run from one outlet or jack to the next and then on to the next and so forth. Splices were often used in the telephone wiring. CATV splitters would be stuck away deep inside walls or in attics somewhere. Little attention was paid to good wiring techniques - as long as the wires were touching every thing would be ok. The signal quality and strength at the end of the chain would be seriously degraded and inconsistent. If one of the connections were to fail all of the devices connected further on down the chain would fail as well. With this method the phone lines follow different paths through the home as the video which are different again from the network. And each of the wiring types usually has its own separate outlet plate. The wiring paths and the location of splices and splitters were rarely documented. Adding to or troubleshooting or documenting this mess was nearly impossible.

On the right is the structured method. One of the main features of this is having a central location and how all of the cables from the outlets go back to the central location. This is commonly called a Home Run configuration. Typically one outlet plate is used for all of the wiring types - phone, video, network or whatever. And the wires are typically run in bundles containing ALL the types of wiring. No splices are used.

The advantages of structured wiring are …….

Configurability - With all of the cables running back to the Central Wiring Panel you can easily change how and what these individual cables are connected to and what they are used for.

Troubleshooting - Each of the cables can be individually isolated from the rest of them and tested for shorts and opens if need be.

No splices - Splices are taboo here because they are prone to failure and can pickup noise and interference and, quite simply, aren't needed here.

More consistent signal quality - with all cables running back to the Central Wiring Panel they can all be connected to the same source and get the same signal level. You can easily avoid having some outlet passing through more splices or splitters than others.

Another feature key to structured wiring is the choice of wiring types. The use of high quality cabling is stressed here. For video this means a high quality RG6/U Quad Shielded cable is typically used instead of the older RG59. The RG6 Quad Shield has less signal loss especially at the higher frequencies used for DSS (satellite) and is less susceptible to interference. For the data network this means a high quality CAT5 , CAT5e, CAT6 or even fiber optics. For the phone this means the same CATx cable used for data instead of the older 4 conductor phone cable resulting in less noise and interference pickup and the capacity for 4 phone lines instead of 2. The idea here is use the most advanced cabling you can afford. You may not need all the capabilities these advanced cables provide today but with home networking and entertainment evolving so quickly you may find them quite useful sooner than you think.