WIRED
Getting your home up to speed in the electronic age requires a little research and a lot of planning

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In a simpler age, wired referred to people agitated by too much caffeine.

Now, in the age of connectivity and cocooning, wired is what your home has to be.

Builders thread new homes with wires and cables allowing owners to access electronic superhighways. That wiring is a reflection of how families live today.

There are more television sets, personal computers and telephones in the house of 2002. Gone are the rabbit ears and rooftop antennas. Gone is the touch-tone phone.

Today, it's bundled wires that deliver -- in the fashion of an electronic umbilical cord -- the household communication, information and entertainment links. These systems bring home lighting and security into play.

State of the art smart houses -- that's what new home buyers want.

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Builders are unrolling the wires as fast as they can to keep pace with the demand.

And because high technology brings product change and improved methods of electronic delivery as fast as the sun sets, the smart house had better be future proof.

For the new home buyer who wants it all, it's time to get armed with some answered FAQs.

The lingo of new-age wiring is filled with stumbling-block terms.

There are the familiar cooper wire and the exotic fiber optic. There is CAT- 5, a shield wire with four pairs of wires.

Then there is CAT-5e -- "e" for enhanced. If it were a liquid pipeline, CAT- 5e would deliver more and faster.

CAT, to further demystify, is the abbreviation for category in the world of twisted-pairs wiring.

An important measure of wiring is not simply what kind it is, but what speed it works at. That's called bandwidth in the land of telecommunications. The speed is reckoned in Mbps -- millions of bits per second or megabits per second. It is a measure of how much information flows over the line in a given time.

Fiber optic wire is actually glass or plastic. Instead of using electric impulses, it uses light impulses to transmit information. Fiber optic wire carries much more information than conventional copper wire and is far less subject to electromagnetic interference.

Along with faster delivery from fiber optic lines comes a drawback. Transmission over fiber optics requires amplification of the signal, not just in the house but between the source and the home. Furthermore, glass fiber requires more protection than copper. Therefore, few communities have fiber optic wires or cables because installation is labor-intensive.

Beyond the definition of technology are questions as simple as "Where's the outlet?" and "How much does it cost?"

When visiting a model home make a note of where the outlets are located.

Do you want or need outlets for telephones and other systems in every room?

Where do you plan to place the home entertainment

center?

What kind of audio system will be installed, and do you plan to connect it throughout the home?

Do you want to wire any of the systems for remote or automatic control?

What does the home builder offer as the standard wiring package?

Will the builder upgrade the wiring or change the placement and number of outlets?

Perhaps the most difficult decision to make -- because of cost -- is whether to future-proof the home by installing a grade of wiring material to accommodate changing information, entertainment and communication delivery.

Industry sources suggest installing the best the homeowner can afford. "It's a lot cheaper to do it while the home is being built than to have to run new wiring later," said one expert.

PROVIDING THE INFRASTRUCTURE FOR TODAY'S SMART HOME

1. Multi-line telephone system supports up to four phone lines for personal, business, fax and Internet needs. 2. Data networking allows computers, printers, scanners and other electronic devices to communicate 3. An Internet sharing device known as a router enables Web surfing on multiple computers simultaneously with protection from hackers. 4. Video distribution allows several TVs to view cable and satellite TV, VCR and DVD. 5. Audio distribution sends music to in-wall speakers in multiple rooms. 6. Video security monitoring allows view of nursery and other key areas of the premises. 7. The structured media center provides the central connection point for telephone, data, audio and video services. . Source: Leviton Manufacturing Company

WIRING LINGO

The glossary of words and terms defining household wiring is as rich as seven- tiered cake. Here is a brief sampling: -- Bandwidth: The difference between the highest and lowest frequencies of a transmission channel. Identifies the amount of data that can be sent through a given channel. Measured in Hertz (Hz);

higher bandwidth numbers mean higher data capacity. -- CO (central office): Telephone company facility where subscribers' lines are joined to switching equipment for connection to each other, locally and long distance. -- Coaxial cable: A cable composed of an insulated central conducting wire wrapped in another cylindrical conductor, which acts as a shield. The whole thing is wrapped in another insulating layer and an outer protective layer. Coaxial cable has great capacity to carry vast quantities of information. -- Device: As distinguished from equipment. In telecommunications, a device is the physical interconnection outlet. Equipment (a computer, phone, fax machine,

etc.) then plugs into the device. -- Mbps: Megabits per second, or 1 million bits per second. -- POTS: Plain old telephone service. The basic service supplying standard single-line telephones, telephone lines and access to the public switched network. Just receive and place calls. No added features like call waiting or call forwarding. -- Premises wiring system: The entire wiring system on the user's premises, especially the supporting wiring that connects the communications outlets to the network interface jack. -- RJ: Registered jack. RJs are telephone and data jacks/applications registered with the Federal Communications Commission. Numbers, like RJ-11, RJ- 45 and others, are widely misused in the telecommunications industry. A more precise way to identify a jack is to specify the number of positions (width of opening) and number of conductors. Example: 8-position, 8-conductor jack or 6- position, 4-conductor jack.

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