

TRENDS & INNOVATIONS

Special trees designed for biofuel

By genetically engineering trees scientists at North Carolina State Univ. hope to change the composition of wood to make it a better biofuel. Trees make poor biofuels because of a compound called lignin, which helps keep trees stiff. Researchers say within 10 years reduced-lignin trees will be on the market. Backers say trees would make a better biofuel because they absorb so much carbon dioxide as they grow and can be trimmed rather than harvested like corn.

New system boosts phone range

A new system to boost cell phone signals is in place and working in west Texas. The new method puts two different broadcast systems on one tower — an engineering feat since they usually require separate towers. The system created by Vanu allows for relatively cheap and easy software updates, too, compared with typical costly hardware replacements. If the new method is perfected, it is likely to result in faster data speeds and fewer dropped calls.

■ **Fighter pilots** will be better able to target enemy planes thanks to a new helmet design. The Helmet-Mounted Display System uses sensors on the outside of the jet and a head tracking system within the cockpit to enable pilots to spot enemy jets even while looking away from the target. Pilots with the new helmet have been 3 times as accurate in tests.

■ **Weight loss** may be as easy as getting a pedometer, according to a Stanford study. The researchers found that those who measured how much they walked, walked more. This helped individuals drop their blood pressure and lose weight. It was done on mostly overweight, inactive women, and the pedometers were randomly assigned.

■ **A new body soap** will cleanse the skin and protect it from harmful UV radiation even after it's washed off. The Aquea face and body wash is the first consumer product to effectively deliver sunscreen in a soap form. The seemingly simple idea is a chemistry headache and works by charging the sunblock so that its positive charge connects with the negative charge of human skin.