



Cutting the Cord

A cellular phone's size disguises the considerable amount of activity going on inside. In a digital phone, your voice is converted by the phone's processor into a stream of 0's and 1's that are transmitted to a base station, received, relayed, and reconverted back to the original sound (actually, an extremely good approximation of that sound) by the receiving phone. Along with sending your words, your phone transmits an identifying code and determines the nearest base station. Hand-off algorithms are employed to help maintain a continuous conversation as the phone's location changes. (Note that E.T. didn't phone home until **after** landing.)



Photo courtesy of Tiny Love.



The **Mathematical Moments** program promotes appreciation and understanding of the role mathematics plays in science, nature, technology, and human culture.