

**Docket #:** S03-121

# Dynamic Spectrum Management

Stanford researchers in John Cioffi's lab have developed a method for allocating resources (bit rate and transmit power) in multi-user, multi-carrier communication systems. The invention provides the optimal power allocation algorithm for the equal-length DSL loops. Additionally, this invention provides a multi-user bit-loading algorithm for general multi-user multi-carrier systems.

## Applications

- Broadband transmission
- Wireless multimedia
- DSL

## Advantages

- Improved performance between systems
- Improved downlink capacity

## Patents

- Issued: [7,593,426 \(USA\)](#)

## Innovators

- John Cioffi
- Jungwon Lee
- Seong Chung

# Licensing Contact

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