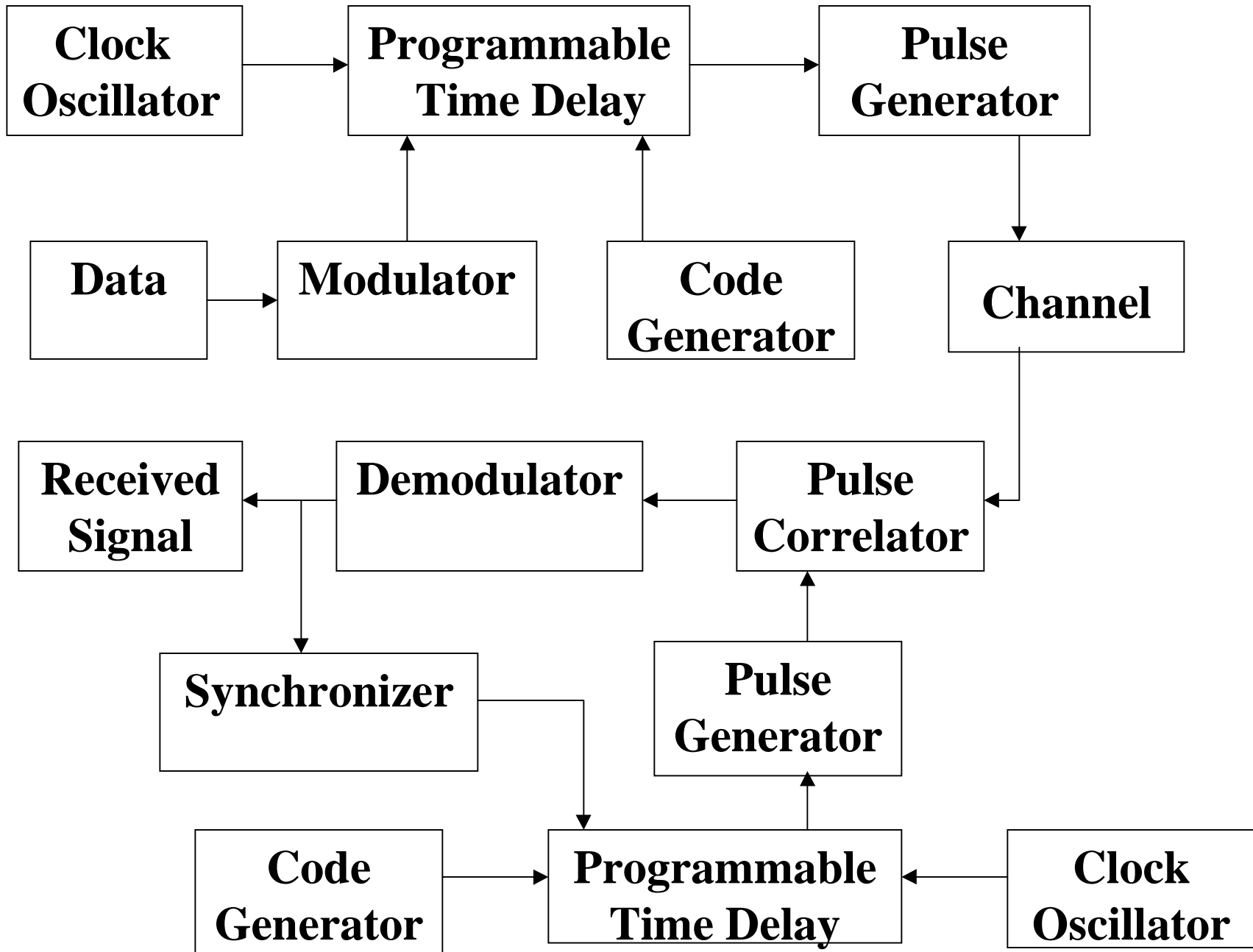


# **System Level Design of Time Hopping Impulse Modulation**

**Mohit Jalori**

**Raghu Raj**



## **Current Work**

- **Currently work on impulse modulation is done primarily by Dr. R.A.Scholtz *et al.* at the Communication Sciences Institute at University of Southern California and Time Domain Corporation**
- **PulseOn**
  - **A 5Mbps wireless LAN which has been tested to a range of 10m and effectively uses a radiated power of  $50\mu\text{W}$**
  - **A full duplex 1.3 GHz radio with an average output power of  $250\mu\text{W}$  and a variable data rate of either 39Kbps or 150Kbps**

# **ADVANTAGES OF TIME HOPPING IMPULSE MODULATION**

- **MULTI-USER ULTRA-WIDEBAND SYSTEM**
- **HIGH DATA RATES**
- **LOW POWER**
- **HIGH PROCESSING GAIN**
- **IMMUNITY TO MULTIPATH FADING**
- **JAMMING RESISTANCE**
- **ENERGY SMOOTHING**