

# Overview

## ERTS

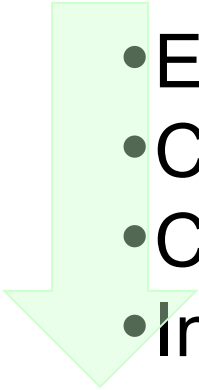
computer  
controlled  
golf car




- *Mission:* Platform for experimental research and education in *Embedded & Real-Time Systems*
- Functional objective: autonomous real-world navigation.
- “*Embedded* “ – special purpose software in a dedicated architecture (**hand-helds, robots, ...**).
- “Nearly all programs are general-purpose. Nearly all actual computation is embedded.”

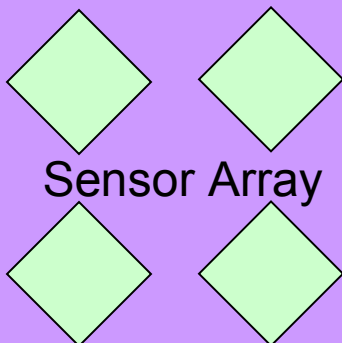
# E&RTS Education

Aim: *collaboration* among multiple domains of expertise.

- 
- Experiments
  - Configuration
  - Components
  - Infrastructure

- 
- Concepts
  - Methods
  - Characteristics
  - Topics

**Experiment**  
(application level)



**ERTS**

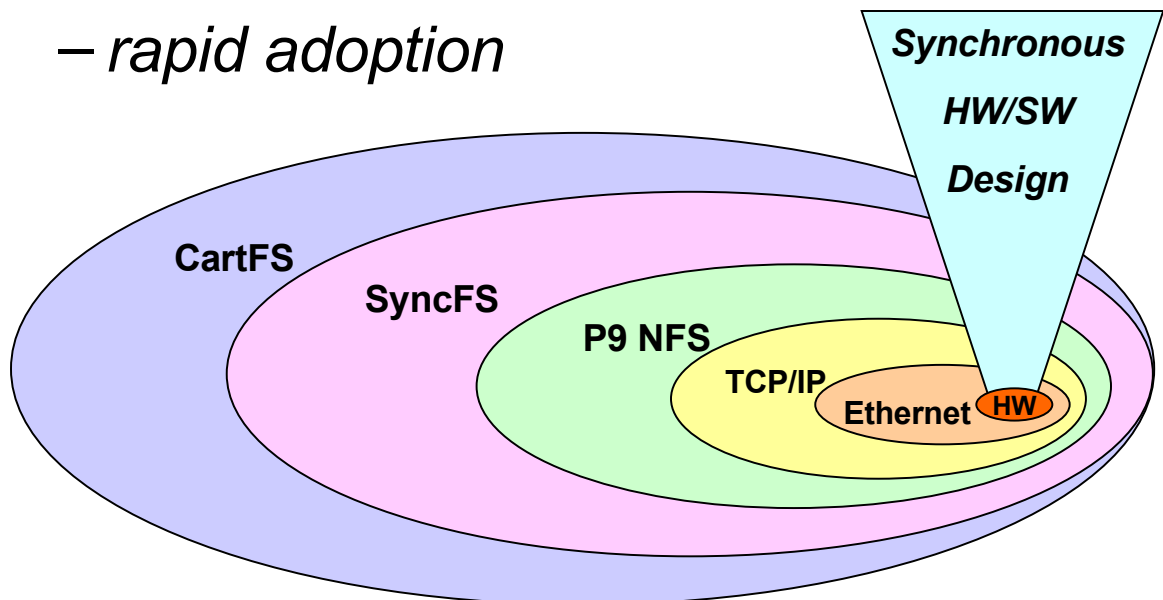
Host Operating System  
(RT Local-Area Network)

Digital Interface  
(amplifiers, devices)

Physical Vehicle  
(actuators/sensors)

# E&RTS Research

- **Collaborative** (IU strengths)
  - cognitive robotics, machine learning, vision, ...
  - *rapid prototyping*
- **Applied** (regional)
  - agriculture, public transportation, automotives, security ...
  - *rapid integration*
- **ES science**
  - models and languages
  - methods and tools
  - *rapid adoption*



# Photos

