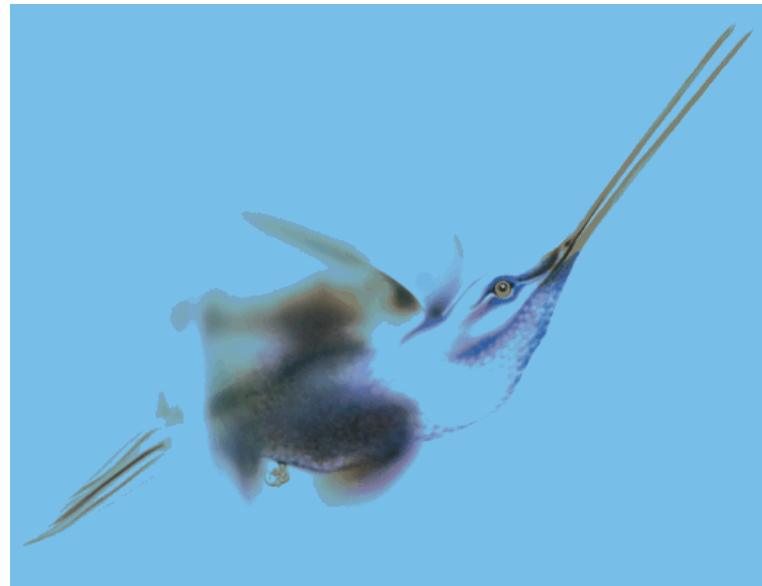


# Software Requirements are System Requirements

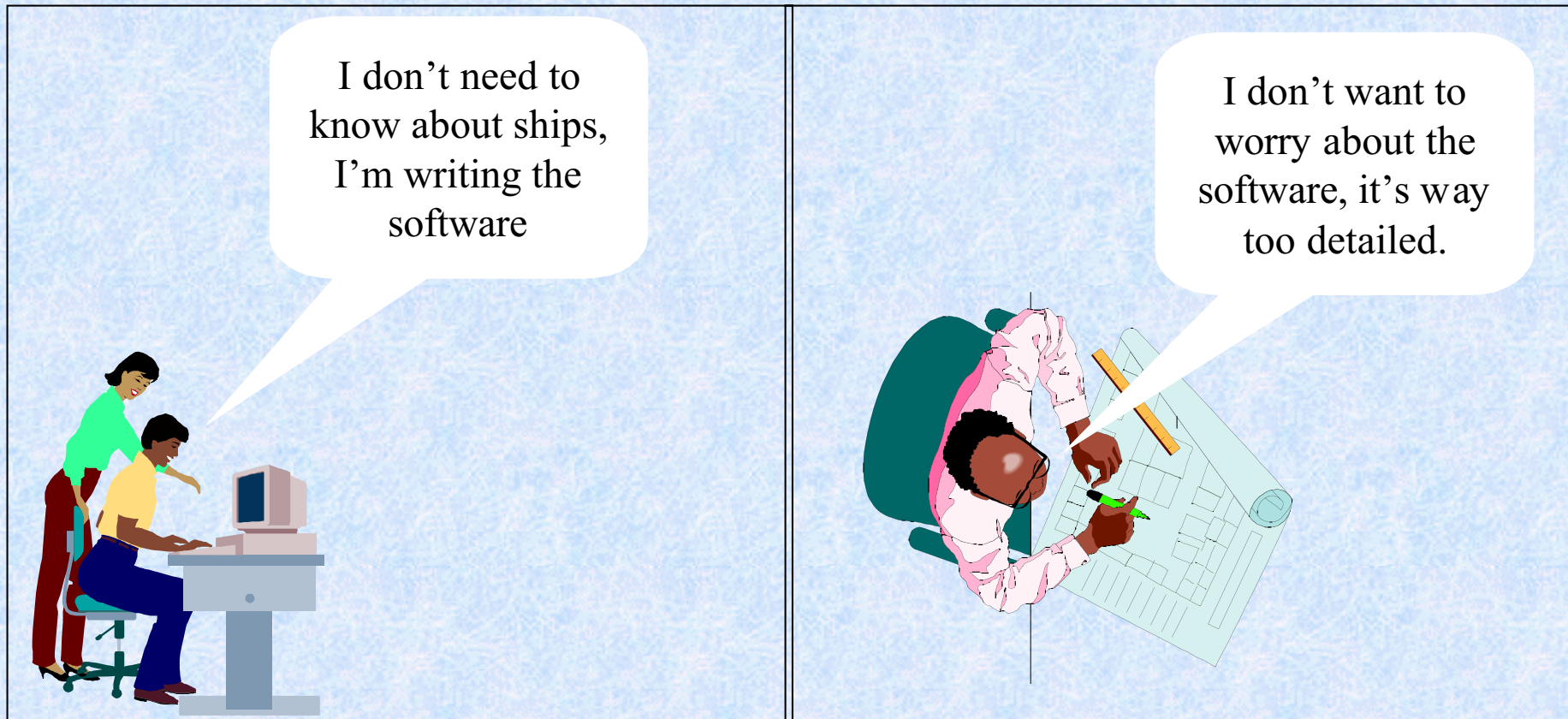


***Anthony Hall***

## ***Software Requirements are Systems Requirements***

- **Who says they aren't?**
- **The theory**
- **The evidence**
- **Design is fractal**
- **So what?**

## *System Integration: How It's Done*

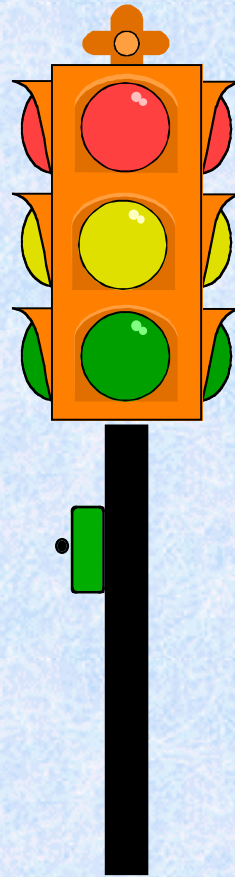
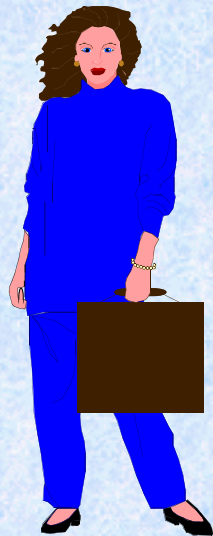


# The Principle: Getting from Requirements to Systems

**D, S ✓ R**

## Requirement

Allow pedestrians to cross the road safely



## Specification

Show a red light to drivers and a green light to pedestrians

## Domain Knowledge

Drivers stop at red lights

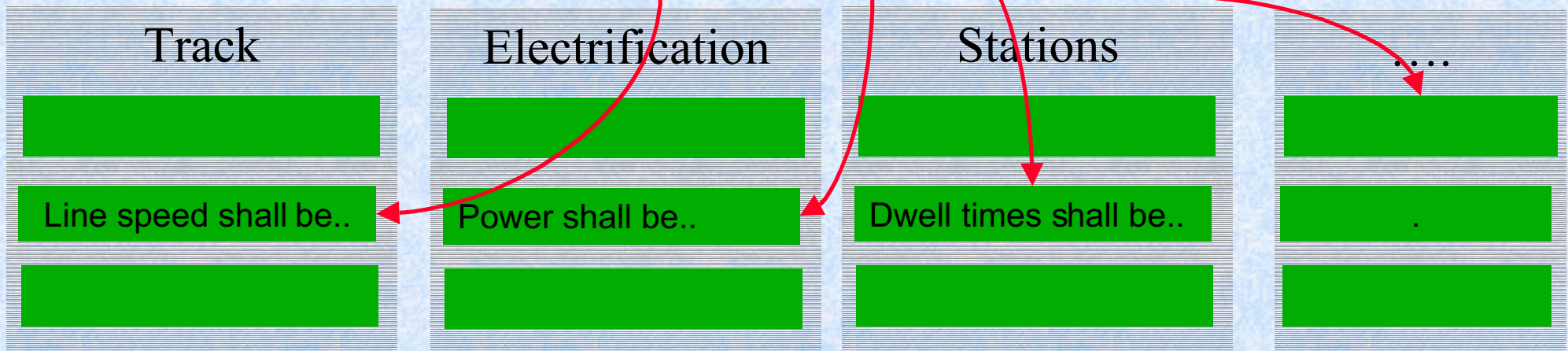


## Rich Traceability

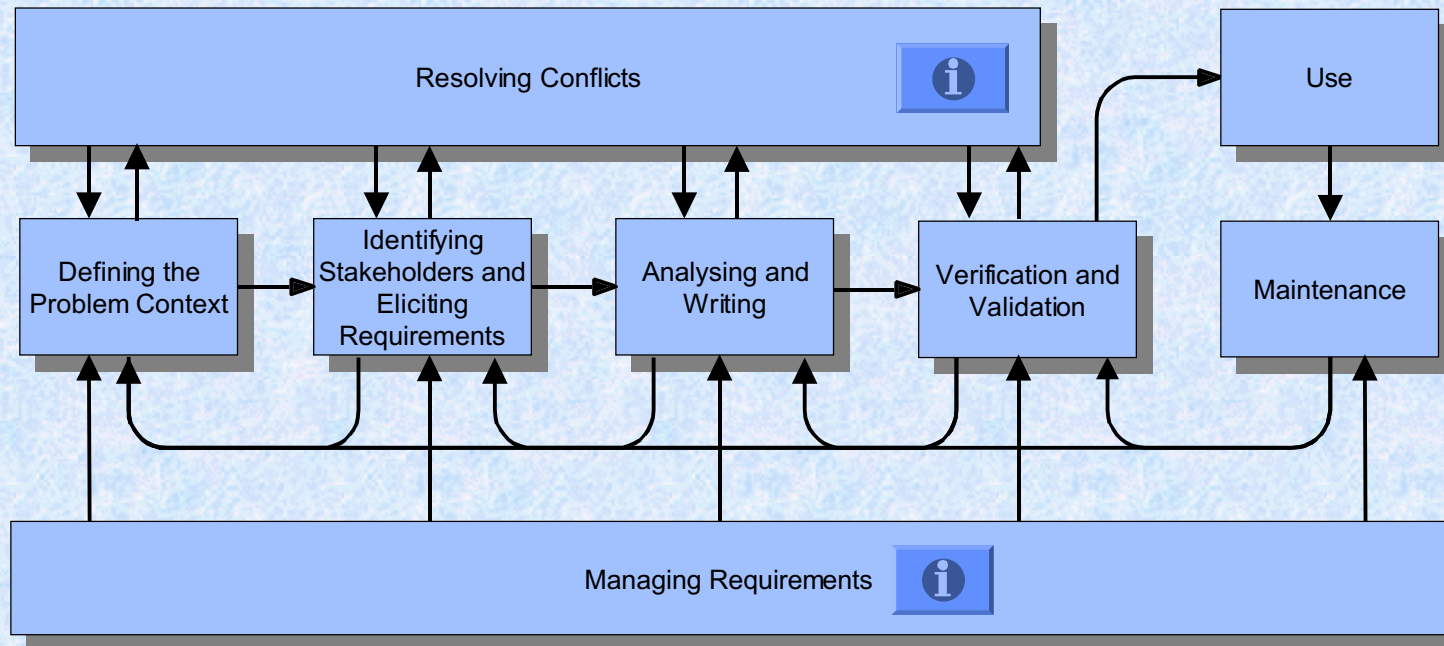
Journey time shall be 2 hours

2 hours is achieved if:

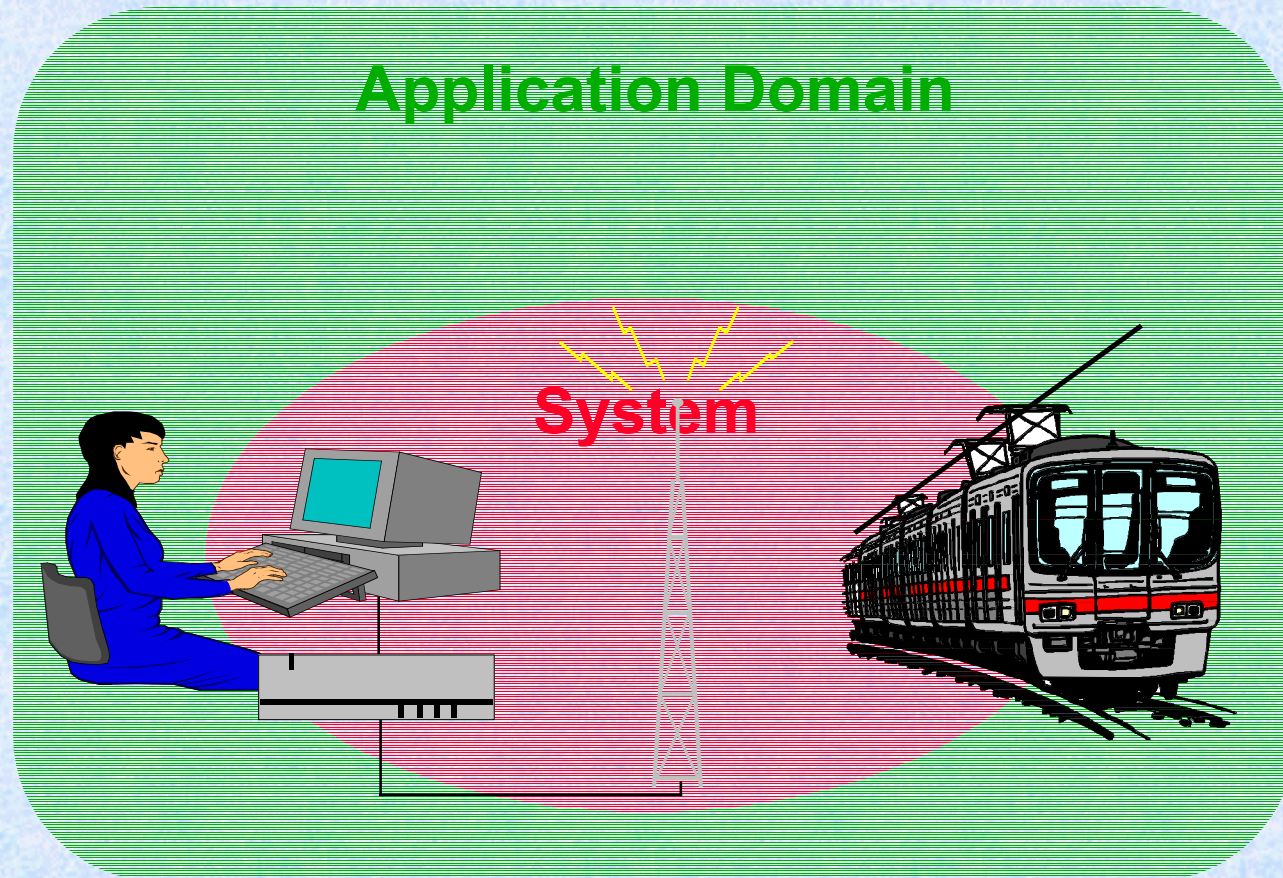
- line speed  $\geq$  ....
- traction power  $\geq$  ...
- station dwell times  $\leq$  ...
- .....



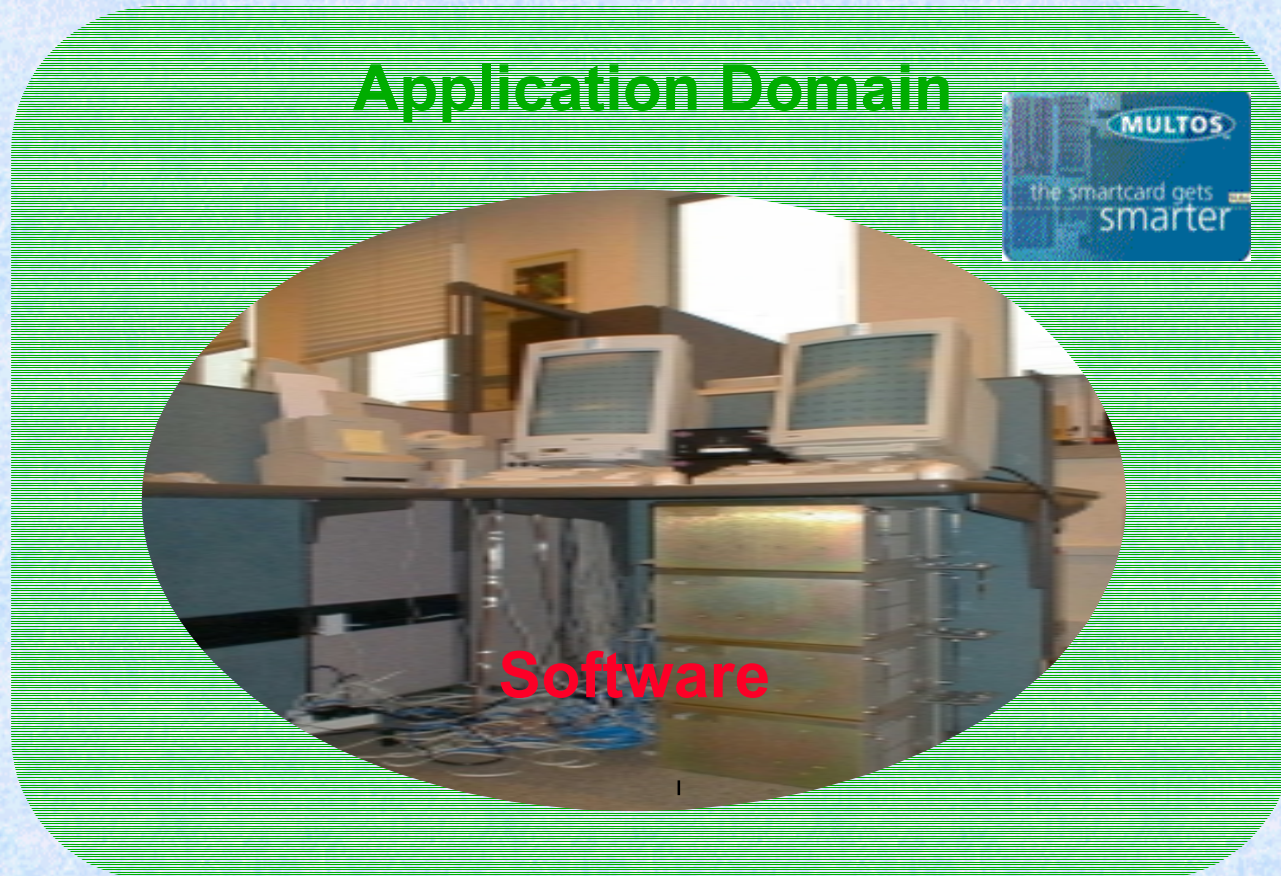
# The Requirements Engineering Process



# A Systems Example

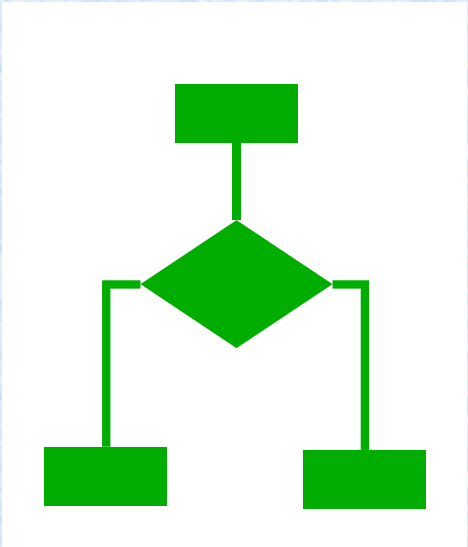
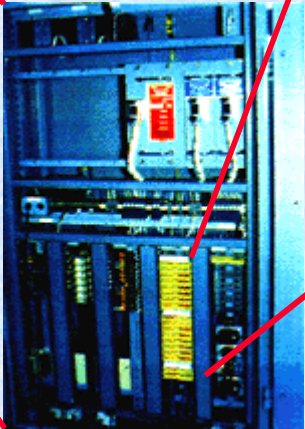


## *A Software Example*

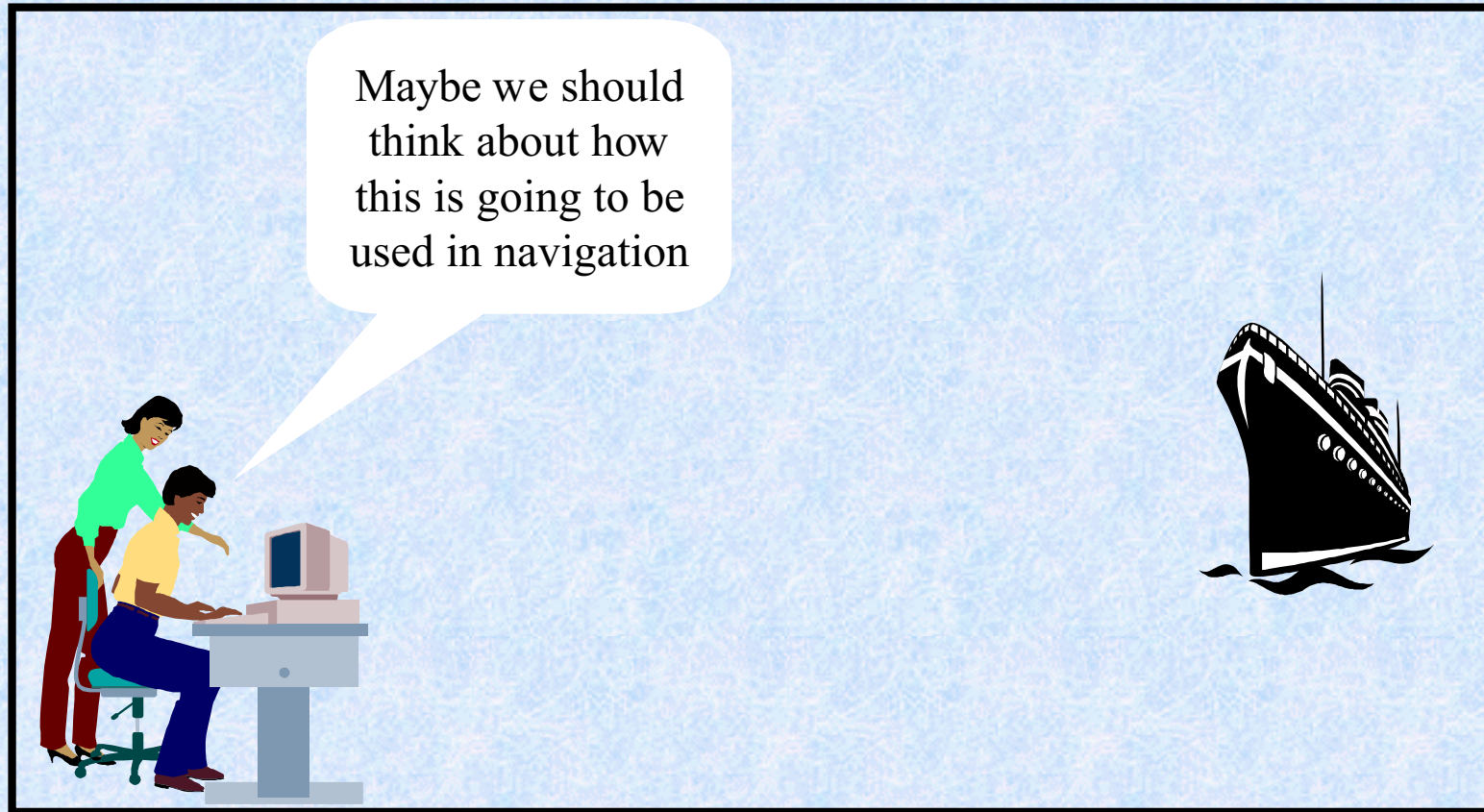




# What is World and What is Machine?



## *So Why Are You Telling Me This?*



## *But it's Not Just One Way Traffic*

