

*The TRAMP Problem  
Statement*

25 October 2001

# *TRAMP scenario*

- ❖ **John's blinker does not work anymore, so he decides to go to a nearby garage.**
- ❖ **When he arrives there, Toni, the clerk at the reception enters the problem into his wearable computer SPOT**
  - ◆ Toni wears a head mounted display and uses speech recognition and Inmedius' WheelMouse to interact with his wearable computer.
  - ◆ Toni is advised by his Wearable to reproduce the failure. Toni lets the customer sit in his car and activate the blinker. It does not work.
- ❖ **The wearable computer displays the following advice:**
  - ◆ “Let the customer drive the car to parking lot 235 where the customer should meet a mechanic.”
- ❖ **The customer drives to lot 235.**
- ❖ **Meanwhile Brandon, a mechanic who is inside the garage, gets a notification (via wireless ethernet):**
  - ◆ “Show up at lot 235”.

## *TRAMP scenario (continued)*

- ❖ **Brandon also receives repair instructions as an IETM (interactive electronic technical manual).**
  - ◆ Brandon puts necessary spare parts into his toolbox and goes to the parking-lot guided by navigation information displayed in his HMD.
- ❖ **At the parking lot John is already waiting.**
  - ◆ Brandon first checks the fuse-box following the steps automatically displayed inside his HMD.
  - ◆ When he opens the fuse box - which is automatically detected by the optical tracker in his wearable system, the next instruction is displayed: "Check the fuse number 3123".
  - ◆ The fuse is OK, so a new set of instructions starts to check the blinker
  - ◆ Brandon then checks the lamp of the blinker.
  - ◆ He finds out that the lamp is blown up, so he replaces it and checks whether the new one works (it does).
- ❖ **Brandon enters the payment information of John into his wearable (speech) and transmits the information via GPRS.**

# *Focus of TRAMP Project: Maintenance with digital documents and wearable Computers*



## *Example of a Visionary Scenario*

- ❖ Car owner Anton is driving on the Autobahn. His car breaks down with a problem that he cannot fix alone.
- ❖ With his UMTS phone, he calls the hotline of his car manufacturer, which responds immediately and notifies the closest workshop.
- ❖ The workshop sends the mechanic Manfred to check Anton's car.
- ❖ Any data which Manfred needs about the car are automatically sent by the car to Anton's UMTS phone, which in turn sends them to the hotline, from there it reaches Manfred.
- ❖ From the data Manfred concludes that the problem could be caused by the distributor. He therefore decides to get a new distributor from the spare parts room and puts into his repair-bag.

## *Example of a Visionary Scenario (continued)*

- ❖ Manfred then determines the location of Anton's car and finds the shortest route to get there.
- ❖ After his arrival he checks the car and finds that there is indeed a problem with the distributor.
- ❖ Replacing a distributor is quite a complex operation, and Manfred uses his access to UMTS to download the necessary data - drawings, cable labelings, and remove-and repair instructions - to do the replacement.
- ❖ The sequence of instructions is shown on his head-mounted display.
- ❖ After the repair is finished, Manfred sends the total time and parts used to the workshop which in return sends a bill to Manfred via UMTS.
- ❖ Manfred prints out the bill and gives it to Anton, who then pays with his credit-card.

# TRAMP Project Communication Infrastructure

