Project Overview

Project Discussion

• Domain: Onboard automotive systems
• Key areas:
  – Active Park Assist (APA)
  – Automatic Pedestrian Collision Avoidance (APCA)
  – Cooperative Adaptive Cruise Control (CACC)
  – Full Speed Range Adaptive Cruise Control (FSRACC)
  – Lane Management System (LMS)
  – Multiple Input Power Steering (STEERING)
• Embedded systems
• Assurance: safety, reliability, security
• Standards:
  – Automotive
  – Modeling
Initial Objectives

• Everyone must gain understanding of domain
  – Articles mentioned in class and on Handouts page
  – Research via web; resources from customer
• Each person on each team complete by Oct. 15 class:
  – Research one example system
  – Identify 3-5 features common with your project
  – Identify 3-5 features different from your project
  – Develop 4-6 questions for your respective project description
  – Identify 3+ Safety requirements (can be questions)
• Project manager collate into one list by Friday, Oct. 17 (and submit electronically to Instructor & TA)

Website requirements

• Skeletal website for each team by Oct. 24
• Top-level page:
  – Brief project Background
  – Brief project Description
  – Team composition, with role names, photos, links to individual web pages
  – Link to instructor and cse435 course page.
• Publicly Accessible Links:
  – Original Project description (PDF)
  – SRS (SW Requirements Spec)
  – Prototype(s)
  – Bibliography of resources used for domain research
• Local Information (only for team and instructors)
  – Accessible by team members, instructor, and TA
  – Agendas and Minutes of all meetings
  – Milestones with internal and required deadlines
  – Access to intermediate drafts of deliverables
  – Discussion forum between team members.
  – Questions/Answers with customers and other resources
Project Requirements

• Requirements Doc
  – Identify preliminary set of requirements (Oct. 27)
  – Compile list of questions/clarifications for customer visit (Oct. 29)
  – **Software Requirements Specification (SRS)**, 2 versions

• Web-based prototypes
  – Prototype 1: interface elements
  – Prototype 2: executable features

• Constraints: must be compatible with companion systems

• High-Level Design specification

• Oral Presentation/Demonstration

Team Composition

• Project Manager
  – Assign tasks
  – Responsible for deliverable submission

• Project Facilitator
  – Setup and run meetings (agendas/minutes cc to Instructor/TA)
  – Post minutes on website

• Domain Expert/Customer Liaison/Security Manager
  – Specialized domain knowledge
  – Interface with customer
  – Identification of security threats and mitigation strategy

• Artifacts Manager
  – Configuration management
  – Web master

• Safety Engineering:
  – Collate Safety requirements
  – Ensure Safety requirements addressed throughout RE process and SRS.
Meeting Requirements

• Agenda
• Leader
• Action list
  – With assignments so we know who is doing what.
  – Timelines so we know when it’s to get done.
• Summary
  – Something happened or there would not have been a
    meeting. Record it briefly.

Project Issue List

• Every issue goes on the list
  – Date and brief description
• Make assignment to get it resolved
• Put resolution on list.
  – “Close” issue.
• 1st version usually generated on 1st read of
  problem statement.
  – And then, back to the customer...
Interviewing

- Have a list of things you want to know.
- Listen.
- Listen.
- Ask open-ended questions.
- Don’t express (show, say) opinions on answers. Just record, and think.
- Listen.
- Ask questions more than one way.