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SOAR26:
Joint Fires & Effects Training System (JFETS)

Robert Wray, Randy Jones – Principal Investigator
Scott Sorel, Al Wallace – Project Manager
Jonathan Beard – Tech Lead
Geoff Morgan, Steve Furtwangler – Research Engineers

Project Details

- SoarTech working as a subcontractor to the Institute for Creative Technologies (ICT)
- Overall Objective
  - Build an immersive training environment for the Ft. Sill artillery school to train forward observers
- SoarTech Objective
  - Create believable and evocative insurgent behaviors for observation & interaction

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Insurgent Behaviors

- Must work in a team
- Geographically distributed in a low-density urban environment
- Must be able to execute pre-planned missions AND adapt appropriately to dynamically changing circumstances
- Agents must fulfill a multitude of roles and engage in asymmetric warfare
  - AK47, Anti-Aircraft, IED Detonator, IED Placer, IED Vehicle, Lookouts, MG, Mortar, RPG, Suicide Bomber, Technical Vehicle
- Should ideally support pedagogic training goals (deemed out scope for 2005/2006)

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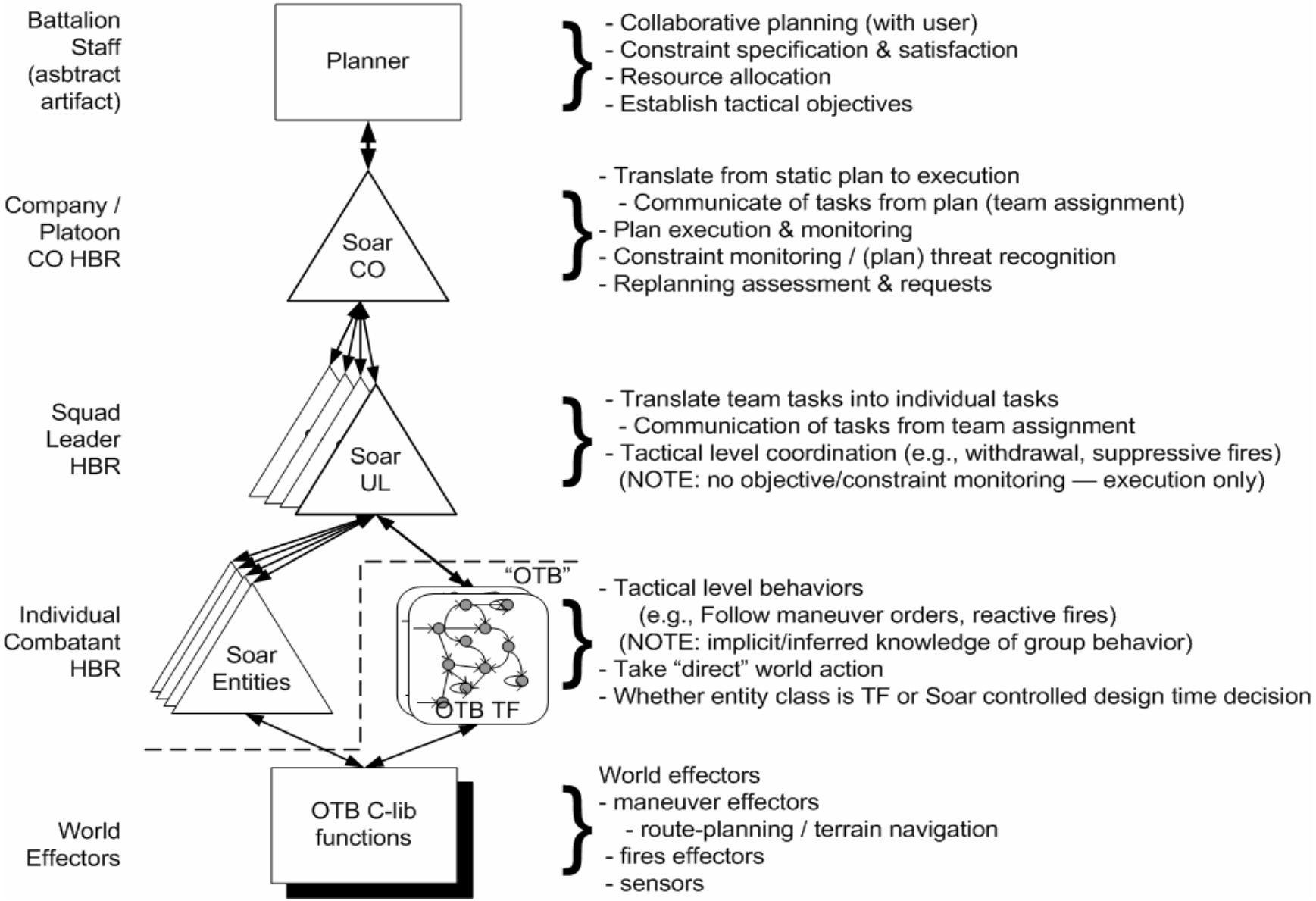
Proposed Multiagent Architecture for IFOR JFETS Demonstration: Component Descriptions



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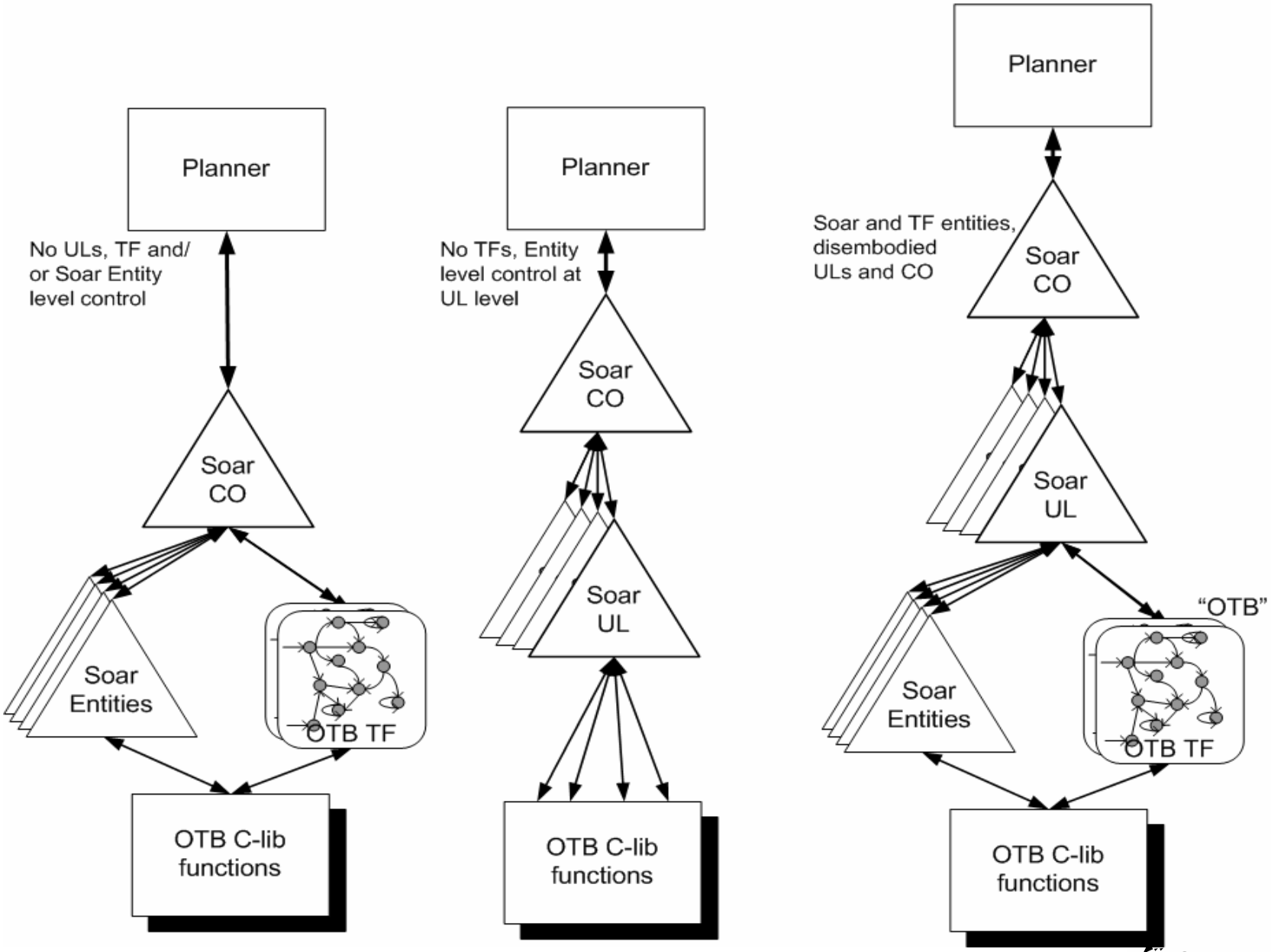
Proposed Multiagent Architecture for IFOR JFETS Demonstration: Control Options



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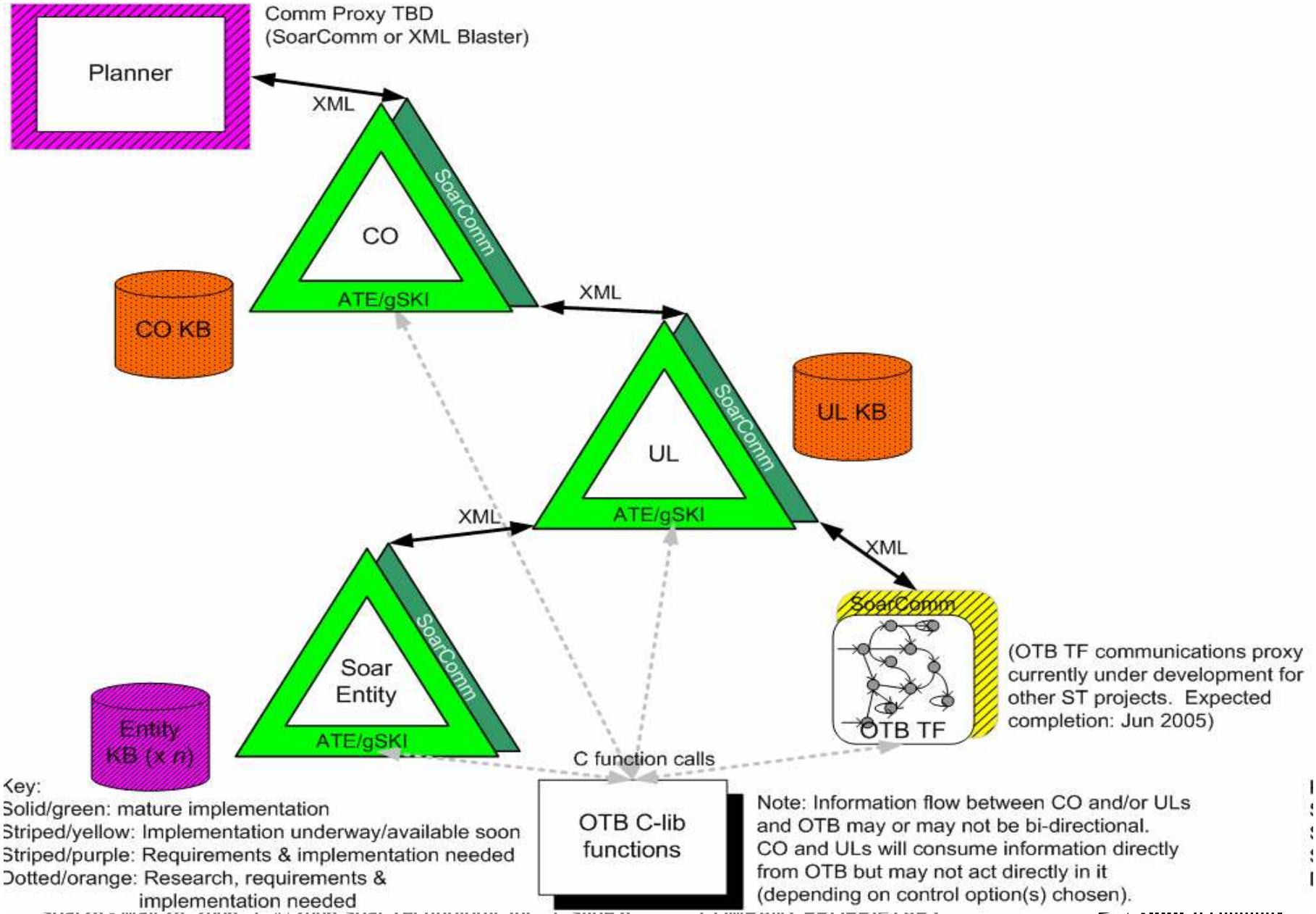
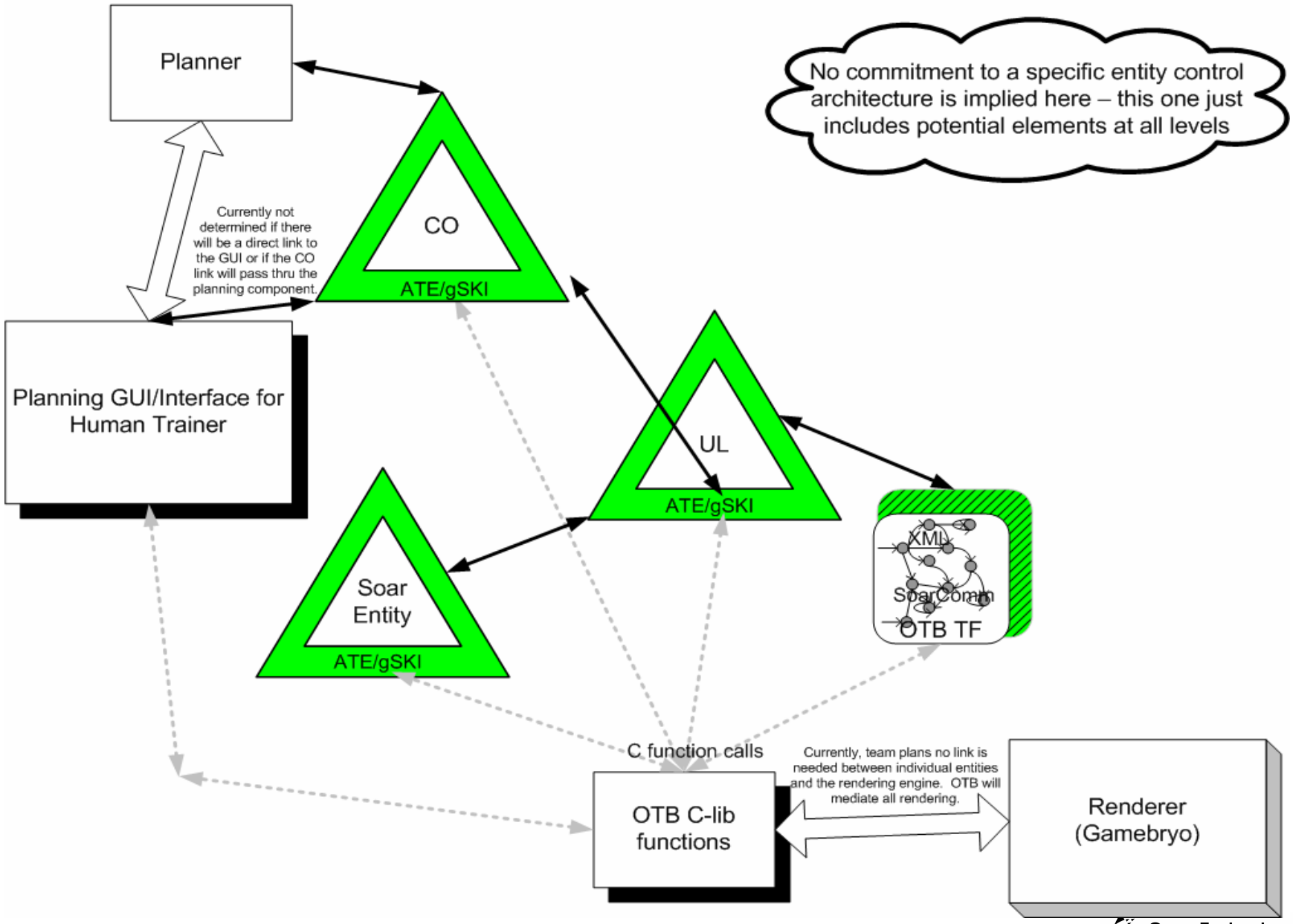
Proposed Multiagent Architecture for IFOR JFETS Demonstration: Middleware



Defining Interactions between Entity Control and Other System Components



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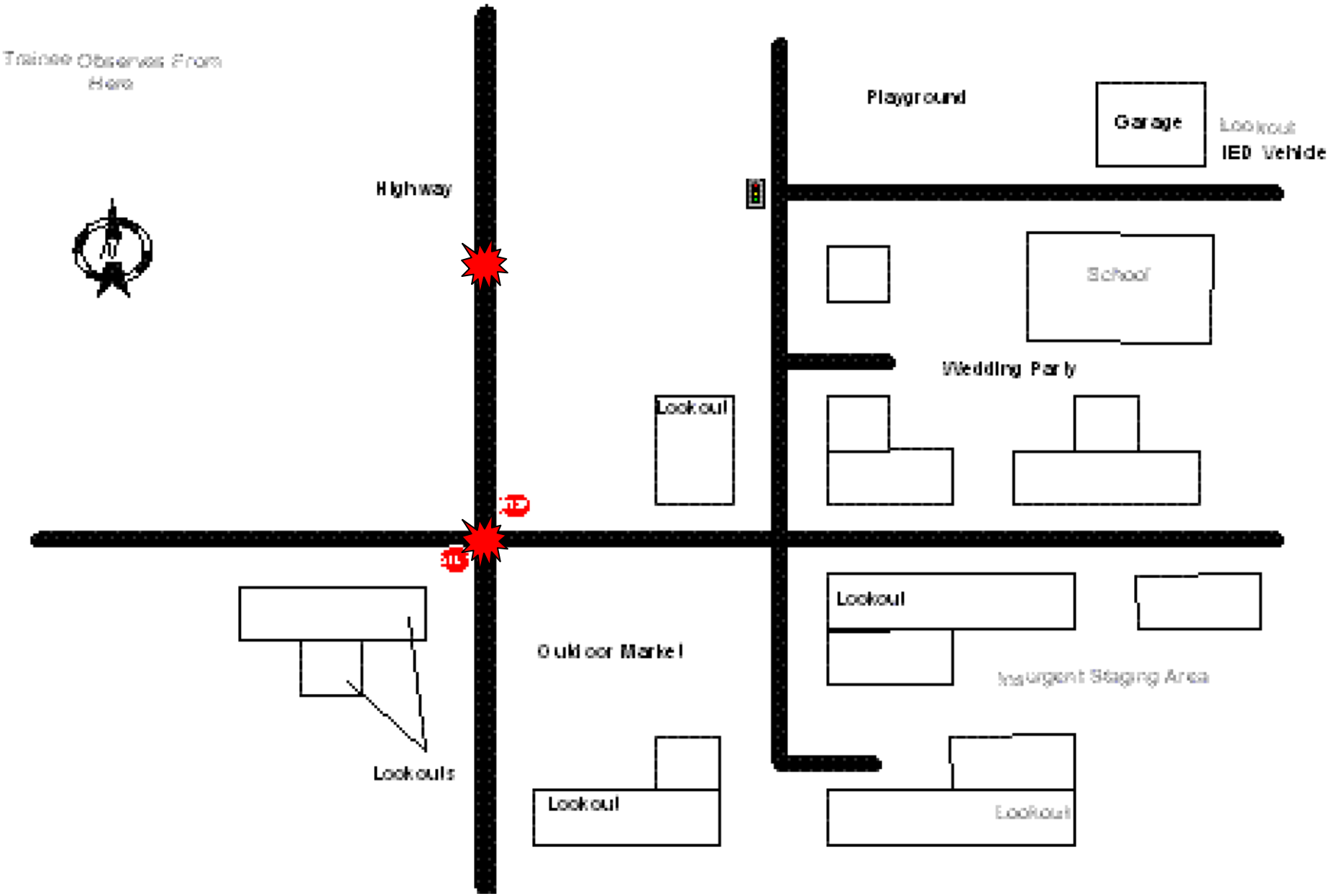
Scenario



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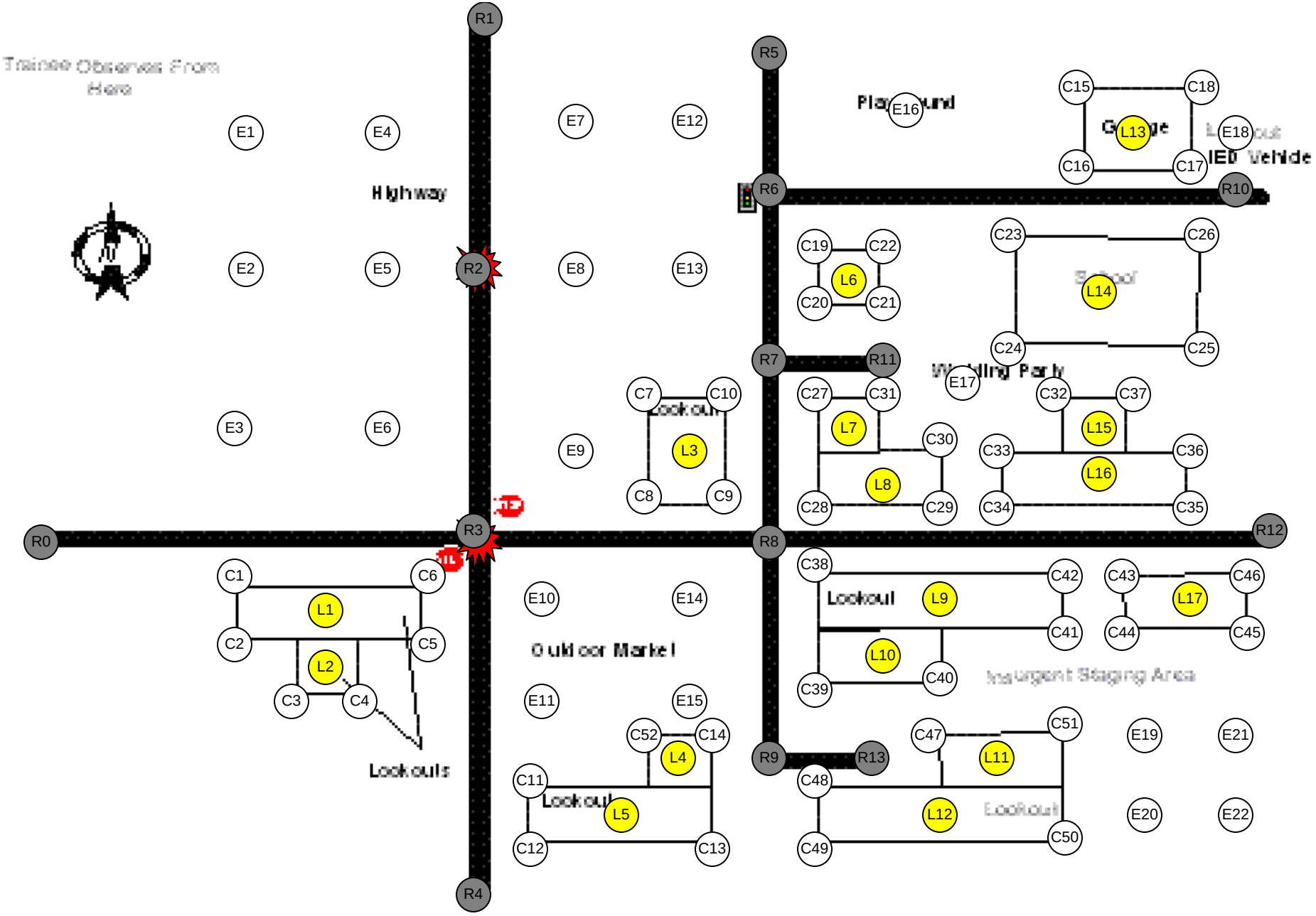

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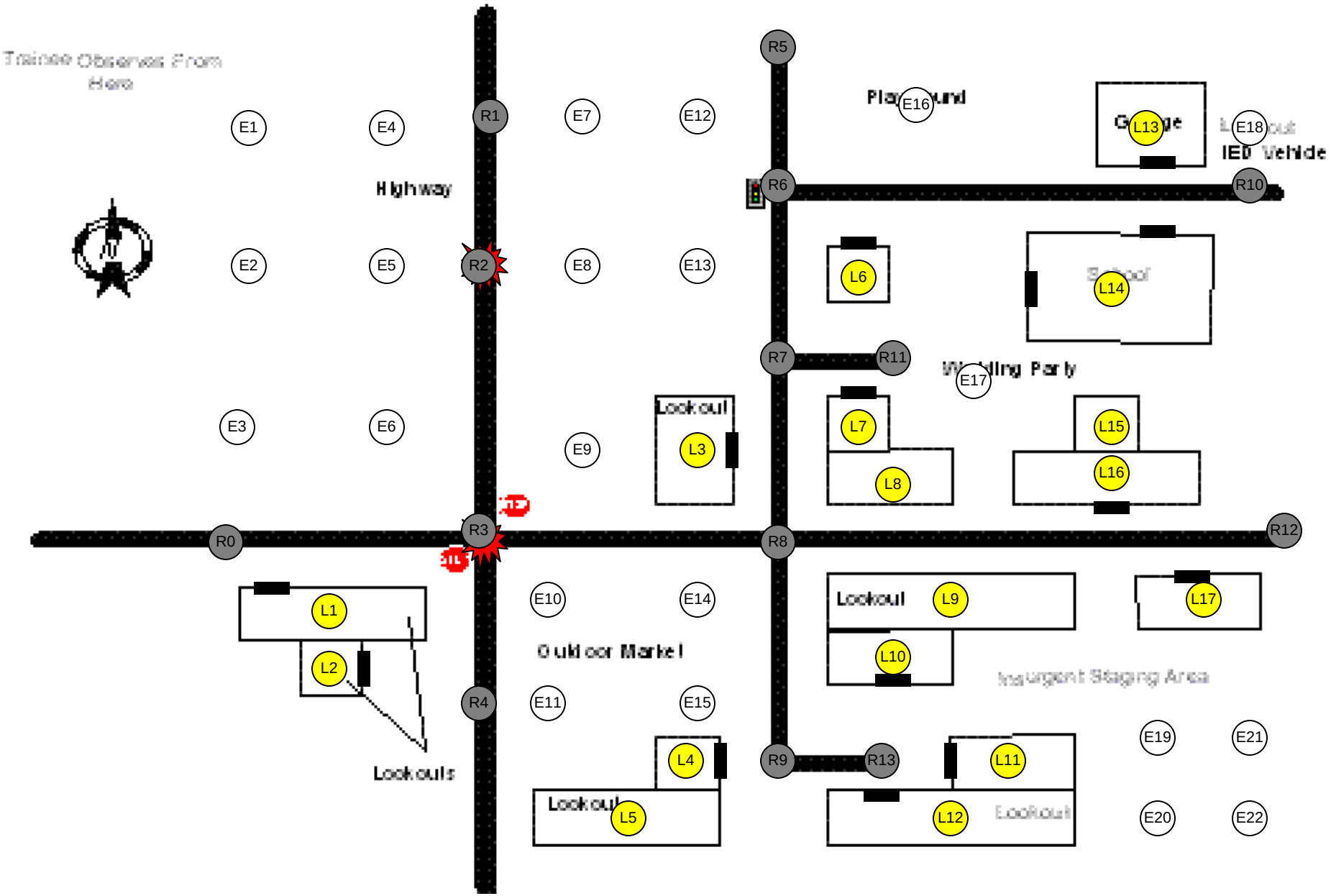

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Nuggets & Coal

- NUGGETS:
  - Leveraged existing agent infrastructure (CIAF, STGS, NGSv2, OTB-SSI, SoarPDL)
  - Quickly built a multi-agent system including 13 new agent types, all with new domain-specific behaviors
  - JFETS technologies quickly adapted by other projects at Soar Technology
  - Got to hang out at the really cool full-surround immersive VR trainer at Ft. Sill!

- COAL:
  - No cool movies for Soar Workshop because ICT dealing with export issues
  - Limited future funding reduces amount of non-engineering (ie, research) work
  - Couldn't talk Mike VanLent into visiting to make a JFETS presentation himself

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