Organization Model in Colored Petri Nets
Using CAESAR III and CPN Tools

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Human Centric Design Environments for Command and Control Systems: The C2 Wind Tunnel
1st REVIEW MEETING

Institute for Software Integrated Systems
Vanderbilt University
The C2 Organization

- UAV
- Environment with Target
  - signals
- Commands
  - data
- Processor control
  - Tactical Picture
- DM Org
  - Request/Ack
- ISRD
  - DTC
  - CAOC
- UAV GS Operator
- UAV GS Processor
CAESAR III Design Environment
DTC: Orders

Orders {
OID: Order Id
Target {
TID: Target Id
STATUS: Target status: active|destroyed|cannotmove|cannotfight|UNKNOWN
LOC: Target Location: {x,y,z}
LOCp: Location accuracy
SPD: Target Speed {x,y,z}
SPEEDp: Speed accuracy
AT: time }
PRIORITY: Order priority
Action:TRACK|RECOM|ABORT_SUCCESS|ABORT_FAILURE|ABORT_ALL
}
DTC: Order Processing

Orders inserted into priority queue. Priority 1 is the highest.

Order is stored, to be used when a recommendation from ISR is received.

Order is sent to ISR.

System Architectures Laboratory

9/19/2007
Recommendations inserted into priority queue based on Order Priority. Priority 1 is the highest.

Recommendations arrive from ISR.
ISR: Receives Orders From DTC

Tactical Picture from UAV.

Order Action = TRACK or RECOM, prepare BDAREquest and send it to UAV.
ISR: Receives Orders From DTC

Order Action = ABORT_ALL, prepare CancelALLBDARequest and send it to UAV.
ISR: Receives Orders From DTC

Order Action = ABORT_SUCCESS or ABORT_FAILURE. Prepare CancelBDARequest and send it to UAV {cancel a specific request due to success or failure}. 