System Capabilities

1. Trainee
   1.1. User Tutorial
      1.1.1. Voiceover
      1.1.2. Update to Maya?
   1.2. Login
      1.2.1. Main browser login message
      1.2.2. User Login
      1.2.3. Position Login
         1.2.3.1. Select Role to Be
      1.2.4. Select Script to Use for Exercise
   1.3. Common Operating Picture
      1.3.1. Starting Status
         1.3.1.1. Check Starting Status
         1.3.1.2. Create ability to have multiple starting statuses
      1.3.2. Exercise Background
         1.3.2.1. View Player Handbook
         1.3.2.2. View EOC Floor Plan
            1.3.2.2.1. Update to interactive floor plan
      1.3.3. Road Closures
         1.3.3.1. Check Status of Road Closures
         1.3.3.2. Create Status of Road Closures
         1.3.3.3. Edit/Update status of Road Closures
         1.3.3.4. Dynamic status updates
      1.3.4. Shelters
         1.3.4.1. Check Status of Shelters
         1.3.4.2. Create Status of Shelters
         1.3.4.3. Edit/Update status of Shelters
         1.3.4.4. Dynamic status updates
      1.3.5. Hospitals
         1.3.5.1. Check Status of Hospitals
         1.3.5.2. Create Status of Hospitals
         1.3.5.3. Edit/Update status of Hospitals
         1.3.5.4. Dynamic status updates
      1.3.6. Points of Distribution (PODs)
         1.3.6.1. Check Status of PODs
         1.3.6.2. Create Status of PODs
         1.3.6.3. Edit/Update status of PODs
1.3.6.4. Dynamic status updates

1.3.7. Disaster Map
   1.3.7.1. View the Disaster Map
   1.3.7.2. Edit/Update Disaster Map
   1.3.7.3. Clear Disaster Map
   1.3.7.4. Save Disaster Map

1.4. Mission/Tasks
   1.4.1. Create a Mission/Task
   1.4.2. Edit/Update Mission/Task
   1.4.3. Delete Mission/Task
   1.4.4. Dynamic status updates

1.5. Resource Requests
   1.5.1. Submit a Resource Request
      1.5.1.1. Add standardized FEMA resource typing
   1.5.2. Edit/Update a Resource Request
   1.5.3. Delete a Resource Request
   1.5.4. Check the status of a Resource Request
   1.5.5. Dynamic status updates

1.6. Significant Events
   1.6.1. Post a Significant Event
   1.6.2. Edit a Significant Event
   1.6.3. Delete a Significant Event
   1.6.4. Dynamic status updates

1.7. Position Log
   1.7.1. Post a Position Log
   1.7.2. Edit a Position Log
   1.7.3. Delete a Position Log

1.8. Logistics
   1.8.1. Acquire a Contract Resource
      1.8.1.1. In-house
      1.8.1.2. Out-house
         1.8.1.2.1. Log to EM Constellation
      1.8.1.3. Dynamic status updates
   1.8.2. Approve a Resource Request
      1.8.2.1. Update a Resource Request
         1.8.2.1.1. Change the status of resource request
         1.8.2.1.2. Add notes section to resource request updates

1.9. Planning
   1.9.1. Create Incident Action Plans
1.9.2. Edit Incident Action Plans
1.9.3. Delete Incident Action Plans

1.10. Disaster Assistant

1.10.1. Ask a Question to the Disaster Assistant
1.10.2. Update disaster assistant?

1.11. Dashboards

1.11.1. Lives Saved, Injured, Deceased
  1.11.1.1. Add dashboard data
  1.11.1.2. Update dashboard data
  1.11.1.3. Delete dashboard data

1.11.2. Cost to county
  1.11.2.1. Add dashboard data
  1.11.2.2. Update dashboard data
  1.11.2.3. Delete dashboard data

1.11.3. View a dashboard

1.12. Injects

1.12.1. Acknowledge inject
1.12.2. Clarify an inject
1.12.3. Respond to Injects
1.12.4. Review Received Injects
1.12.5. Log injects

1.13. Chat

1.13.1. Initiate Chat
1.13.2. End Chat
1.13.3. Receive Chat
1.13.4. Accept Chat
1.13.5. Reject Chat

1.14. Logout

1.14.1. Release trainee role

1.15. Create Help files

1.15.1. Find/use automatic help file creator

1.16. Logging

1.16.1. Log chats
1.16.2. Log significant events
1.16.3. Log user actions during the exercise
  1.16.3.1. log user response to injects
1.16.4. log position logs

1.17. Loose Ends

1.17.1. Add validation controls to interfaces
1.17.2. Update Chat program?

1.18. Logout

1.18.1. Automatic logout if time expires
1.18.2. Automatic logout if user closes windows without logging out

2. Exercise Developer
   2.1. Login
      2.1.1. Main browser login message
   2.2. User Tutorial
   2.3. Handbook Developer
      2.3.1. Update the handbook developer
      2.3.2. Add figures to handbook developer
   2.4. Starting Status
      2.4.1. Create starting status
         2.4.1.1. Update starting status
            2.4.1.1.1. Text
               2.4.1.1.1.1. Insert text
               2.4.1.1.1.2. Update text
            2.4.1.1.2. Figures
               2.4.1.1.2.1. Insert figure
               2.4.1.1.2.2. Change figure
               2.4.1.1.2.3. Delete figure
      2.4.1.2. Create multiple starting status reports
   2.5. Target Capabilities
      2.5.1. Target Capabilities
         2.5.1.1. Add target capabilities to script
            2.5.1.1.1. Add new target capability
            2.5.1.1.2. Add target capability from database
         2.5.1.2. Edit target capabilities
      2.5.2. Target Capability Metrics
         2.5.2.1. Add target capability metrics to script
            2.5.2.1.1. Add new target capability metric
            2.5.2.1.2. Add target capability metric from database
         2.5.2.2. Edit target capability metrics
      2.5.2.3. Delete target capability metrics from script
   2.5.3. Exercise Objectives
      2.5.3.1. Create exercise objectives
2.5.3.2. Add exercise objectives to script
2.5.3.3. Delete exercise objectives to script

2.5.4. Create exercise handouts for evaluators

2.6. Scripting

2.6.1. Create a Script
2.6.2. Edit Script
2.6.2.1. Injects
   2.6.2.1.1. Add inject from Database
   2.6.2.1.2. Add New Inject
   2.6.2.1.3. Delete an inject from the script
   2.6.2.1.4. Edit an inject
   2.6.2.1.5. Move Injects Around Ad-hocly
2.6.3. Delete Script
2.6.4. Import/Upload Script
2.6.5. Export Script
2.6.6. Archive Script
   2.6.6.1. View Archived script?

2.7. Database controls
2.7.1. Clear the logs for the script
2.7.2. Reset the logs for the script
2.7.3. Clear the logs for the player

2.8. Exercise Controller
2.8.1. User Tutorial
2.8.2. Control the Exercise
   2.8.2.1. Start Exercise
   2.8.2.2. Pause Exercise
   2.8.2.3. Terminate Exercise
   2.8.2.4. Next Block
   2.8.2.5. Fast Time
   2.8.2.6. Move Injects Around Ad-hocly
2.8.3. Player Reports
   2.8.3.1. View Player Reports
   2.8.3.2. Filter player reports
   2.8.3.3. Sort player report elements
   2.9.3.4 More detailed player reports
2.8.4. Logout

2.9. Loose Ends
2.9.1. Add validation controls to interfaces

3. Researcher
3.1. Login
   3.1.1. Main browser login message

3.2. Choose Exercise Metrics
   3.2.1. Percentage injects received but not responded to (missed)
   3.2.2. Average inject response time (when does response time start and end?)
   3.2.3. Correctly respond to injects
   3.2.4. Response to injects within capability metrics

3.3. View Chat Logs
   3.3.1. Analyze chat logs
      3.3.1.1. Sort chat log elements
      3.3.1.2. Filter chat log elements

3.4. View Position Logs
   3.4.1. Analyze position logs
      3.4.1.1. Sort position log elements
      3.4.1.2. Filter position log elements

3.5. View Player Reports
   3.5.1. Create more detailed player reports
      3.5.1.1. Include expected user actions to injects
      3.5.1.2. Better logging
   3.5.2. View single player report
      3.5.2.1. Analyze player reports
         3.5.2.1.1. Sort player report elements
         3.5.2.1.2. Filter player report elements
         3.5.2.1.3. More detailed player reports
   3.5.3. View multiple player reports
      3.5.3.1. Analyze player reports
         3.5.3.1.1. Sort player report elements
         3.5.3.1.2. Filter player report elements

3.6. Logout
3.7. Loose Ends
   3.7.1. Add validation controls to interfaces

4. Administrator
4.1. Create Console
   4.1.1. Login
   4.1.2. Create User Logins
4.1.3. Delete User Logins
4.1.4. Reset Locked Players

4.2. Manual Database Access
   4.2.1. Modify tables and data in tables

4.3. Logout
4.4. Loose Ends
   4.4.1. Add validation controls to interfaces

5. Database
   5.1. Input validation
      5.1.1. Add validation controls to interfaces

6. Documentation
   6.1. Developer
      6.1.1. Inline documentation (code)
   6.2. System Documentation
      6.2.1. Flow charts
         6.2.1.1. System Overview
         6.2.1.2. Trainee
         6.2.1.3. Exercise Developer
         6.2.1.4. Exercise Controller
         6.2.1.5. Researcher
         6.2.1.6. Administrator
   6.3. User Manuals
      6.3.1. Installation
      6.3.2. System Overview
      6.3.3. Trainee
      6.3.4. Exercise Developer
      6.3.5. Exercise Controller
      6.3.6. Researcher
      6.3.7. Administrator

7. System Improvements
   7.1. System backup
      7.1.1. Eclipse on personal computer
      7.1.2. Servers (through svn)
   7.2. General Loose Ends
      7.2.1. Expand menu bars to fit screen
      7.2.2. Adjust menu size to menu minimization
      7.2.3. Salvation Army listed twice/Public Safety listed twice
      7.2.4. Compatibility with different web browsers
7.2.4.1. Firefox 3.6.18 or greater
7.2.4.2. Internet Explorer
7.2.4.3. Safari

7.3. Review Reverse AJAX functionality
   7.3.1. Chat program
   7.3.2. Remote functionality
   7.3.3. Scripting

7.4. XML Standards
   7.4.1. Create standards for data transfer and storage
   7.4.2. Switch database to XML database

7.5. Artificial Tutoring System
   7.5.1. Expert System

7.6. Decision Support System

7.7. Code Release on Source Forge
   7.7.1. Scrub documents
      7.7.1.1. Create own Database
      7.7.1.2. Create passwords and URLs to database
      7.7.1.3. Delete passwords and URLs to server
      7.7.1.4. Use a virtual player?

7.8. Experiment with Cyberinfrastructure lab at Notre Dame
   7.8.1. Write Journal Paper

8. Testing
8.1. System
   8.1.1. System scalability
   8.1.2. Server scalability

8.2. Web-browser compatibility
   8.2.1. Firefox 3.6.18 or greater
   8.2.2. Internet Explorer
   8.2.3. Safari

8.3. Trainee Console
   8.3.1. All elements working
   8.3.2. Input validation
   8.3.3. User interface design and functionality
   8.3.4. Security

8.4. Exercise Developer
   8.4.1. All elements
   8.4.2. Input validation
   8.4.3. User interface design and functionality
8.4.4. Security

8.5. Exercise Controller
   8.5.1. All elements
   8.5.2. Input validation
   8.5.3. User interface design and functionality
   8.5.4. Security

8.6. Researcher
   8.6.1. All elements
   8.6.2. Input validation
   8.6.3. User interface design and functionality
   8.6.4. Security

8.7. Administrator
   8.7.1. All elements
   8.7.2. Input validation
   8.7.3. User interface design and functionality
   8.7.4. Security

8.8. Database
   8.8.1. Input validation
   8.8.2. Scalability
   8.8.3. Security
1 Software Call Graph