



Online Gaming and its Effects

“...a 21-year-old has spent 10,000 hours gaming, close to about the same amount of time spent in school from 5th to 12th grade”

“We invest 3 billion hours weekly playing online games”

Jane McGonigal – 2010 © TED Conferences, LLC





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Optimizing Network Situational Awareness using 3D Game Development

Andrew Moran

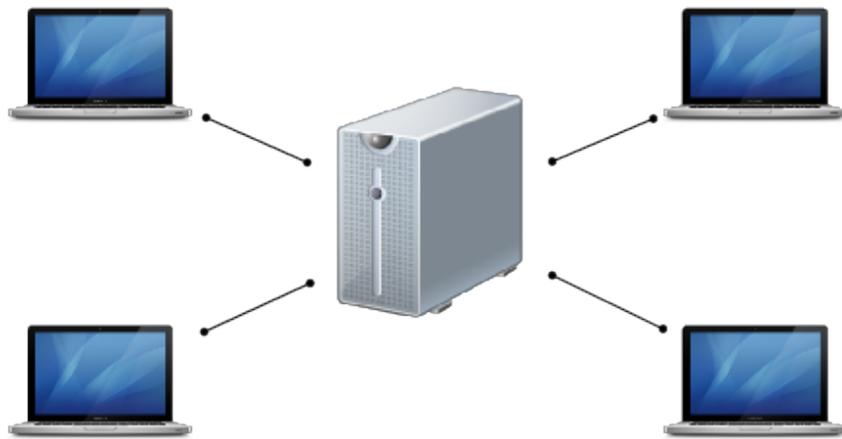
Storyboard Talk

24 September 2013





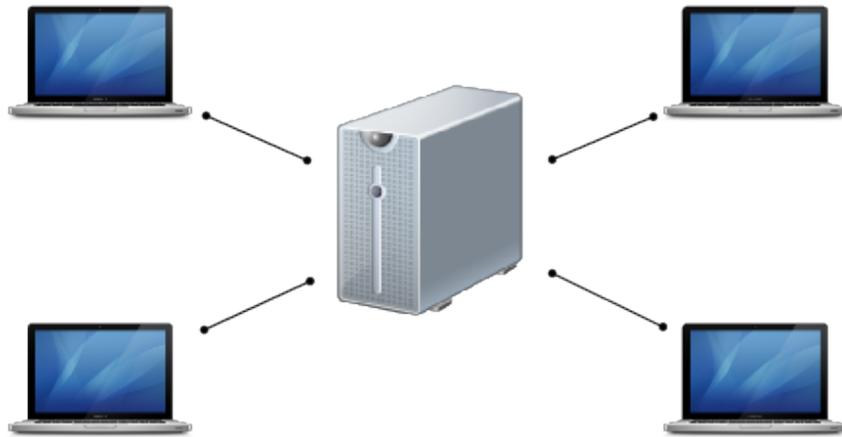
How to (Visually) Manage a Network



Network
• **Links**
• **Nodes**
• **Servers**



How to (Visually) Manage a Network



Network

-
-
-

Links
Nodes
Servers

Monitor & Management



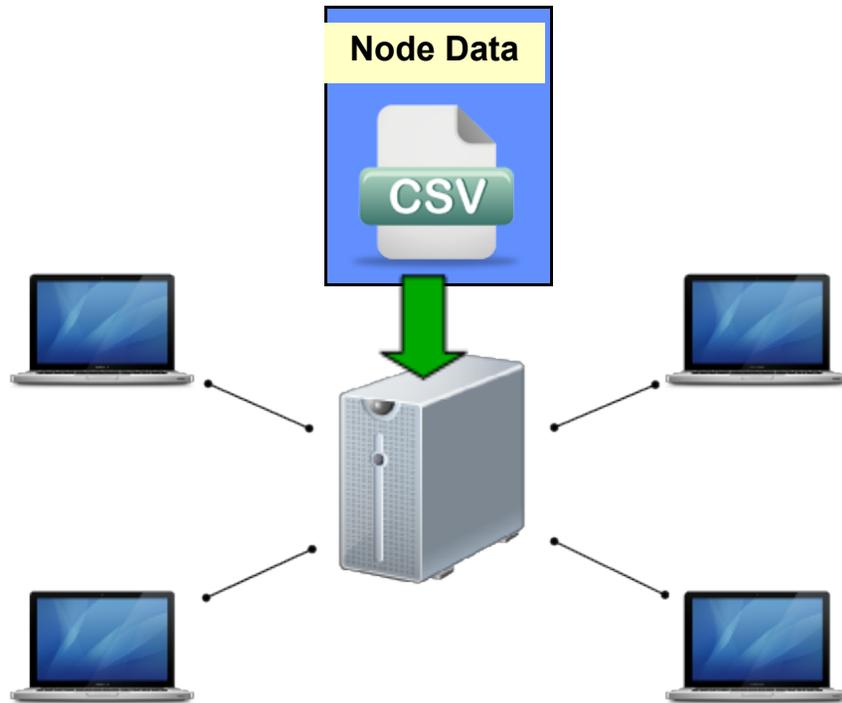
Situational Awareness

-
-
-

Perception *View*
Comprehension *Alert*
Projection *Take Action*



How to (Visually) Manage a Network



LLGRID

Interactive Parallel Computing System

Network

- Links
- Nodes
- Servers

Monitor & Management

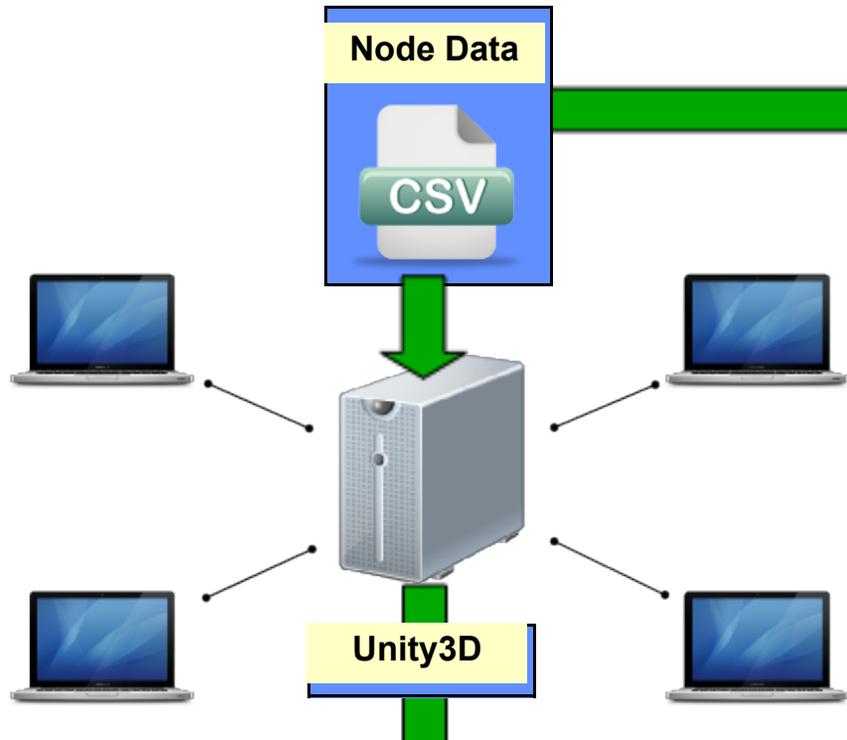


Situational Awareness

- Perception *View*
- Comprehension *Alert*
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How to (Visually) Manage a Network



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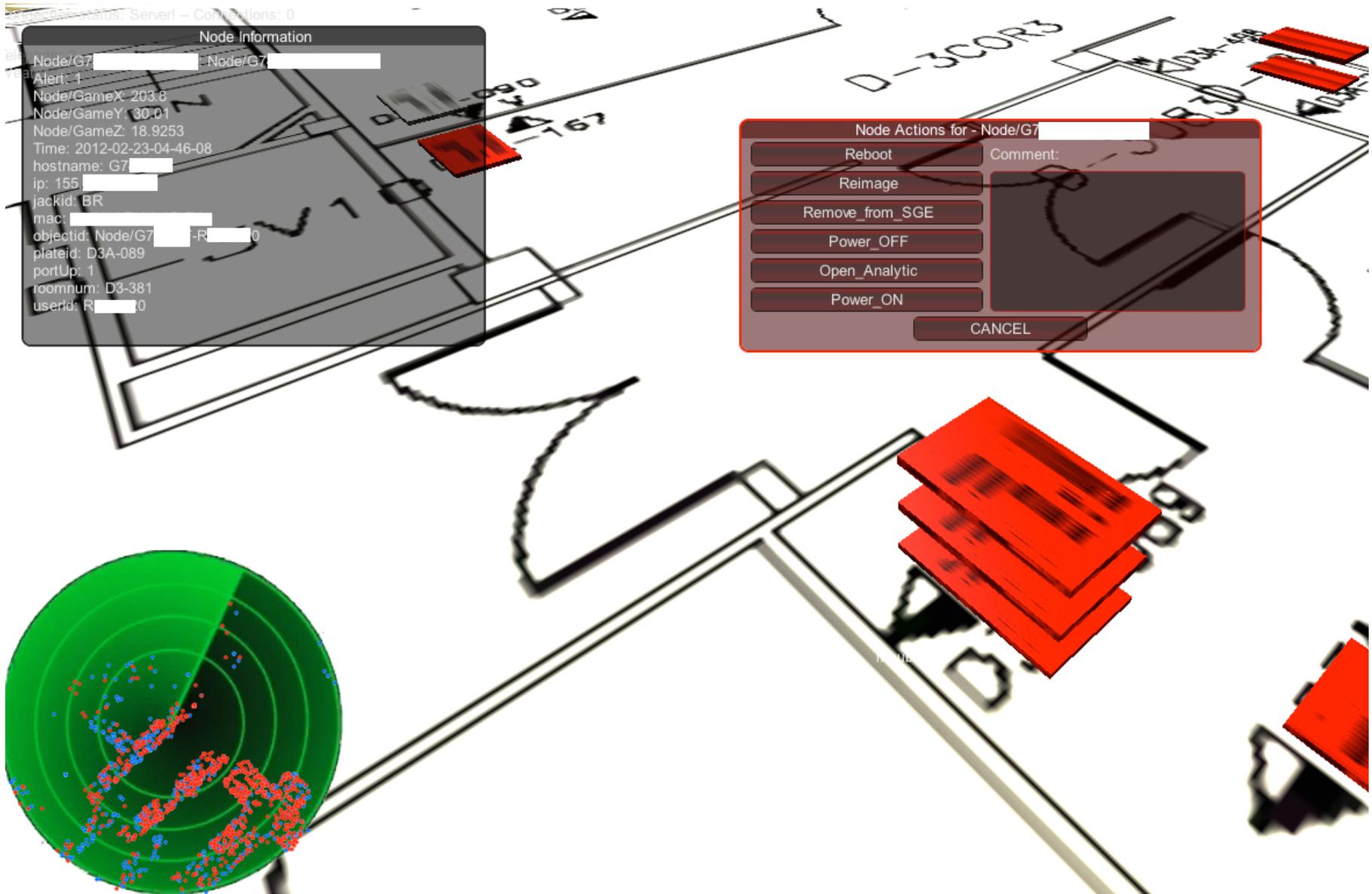


Situational Awareness

- Perception *View*
- Comprehension *Alert*
- Projection *Take Action*



Example of Situational Awareness





Example of Situational Awareness

The screenshot displays a complex user interface for situational awareness. The background is a floor plan with several red server racks highlighted. In the bottom-left corner, there is a circular radar view with concentric green rings and a cluster of red and blue dots. Two panels are overlaid on the floor plan: a grey 'Node Information' panel on the left and a red 'Node Actions for - Node/G7' panel on the right. The 'Node Information' panel lists various attributes for a specific node, including game coordinates, time, hostname, IP, MAC, and room number. The 'Node Actions' panel provides a list of control options for that node, such as Reboot, Reimage, Power_OFF, and Power_ON, along with a comment field and a CANCEL button.

Node Information

Node/G7 [redacted] Node/G7 [redacted]
Alert: 1
Node/GameX: 203.8
Node/GameY: 30.01
Node/GameZ: 18.9253
Time: 2012-02-23-04-46-08
hostname: G7 [redacted]
ip: 155 [redacted]
jackid: BR
mac: [redacted]
objectid: Node/G7 [redacted]-R [redacted]
plateid: D3A-089
portUp: 1
roomnum: D3-381
userid: R [redacted]

Node Actions for - Node/G7 [redacted]

Reboot Comment:
Reimage
Remove_from_SGE
Power_OFF
Open_Analytic
Power_ON
CANCEL

User Interface View – radar, node groups, floor plans



Example of Situational Awareness

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1

2

User Interface

View Alert

- radar, node groups, floor plans
- mouse hover popup



Example of Situational Awareness

1. View – radar, node groups, floor plans

2. Alert – mouse hover popup

3. Take Action – mouse click pop up

User Interface

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