



# ASCE Version 4 Developments

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# Core development

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- Many improvements under-the-hood
  - Display engine
- Streamlined underlying architecture
  - Synchronisation of data
- Largely for benefit of plugin engine



# Plugin engine

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- Better access to the network data
- Better interaction with the user
- Better user interfaces
- *demo*



# For plugin developers, including us

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- Wider choice of programming languages for plugin development
- More powerful API
  - Makes existing tasks easier
  - Makes new tasks possible
  - Access any part of the network
  - Manipulating items in user views
- Multiple plugins open and active at once
- Better menu integration



## ASCE plugin window

## Node layout - line and curves

Layout the selected nodes into an evenly spaced line or curve.

**Layout options** vertical line ▾

**Explanation** Horizontal and vertical lines - these options create a straight vertical or horizontal line through the centres of the selected nodes. In addition, the nodes are then evenly spaced along this line.

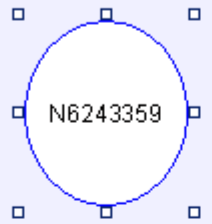
Diagonal line - this option defines a straight line through the outermost nodes in the selection, and then moves the centres of the other selected nodes evenly onto this line. Useful for creating "diagonal" lines of nodes.

Smooth curve - this option fits a smooth curve (cubic spline) through the selected nodes, using the outermost nodes to define the base line, and selects the node that is farthest node from this line for the control point. You may need to experiment with the initial layout to learn the behaviour of this function.

Preview

OK

Cancel



Align Objects:

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

Distribute Objects:

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

# Plugin manager

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- Install new plugins
- List the ones you have installed
- Show you their
  - Version numbers
  - Installation location
  - Author
  - Help documentation
- Plugins can be switched on and off
- *demo*

# Managing change

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- Safety cases have many stakeholders
  - Co-authors
  - Reviewers — internal and external
- How to collect and collate additional input?
- How to see who did what when
  
- Two approaches
  - 1: Edit and compare
  - 2: Add comments



# Edit and compare

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- Existing solution: ASCE Difference Tool
- Now enhanced with inline markup capability
  - *Demo Difference Tool*
  - Same capability for DNRs
  - *Demo*

# Alternative approach: adding comments

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- The edit and compare approach may not be suitable
  - Only as good as your configuration management system
  - Not all stakeholders will have ASCE, e.g. external reviewers
  - Single authorship may be preferable, and simpler
- ASCE Browser - enhanced
  - Now allows reader to add comments
- *Demo*
- Likely to have be commercial
- ASCE part implemented as plugin gives us flexibility

# Exchanging comments

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- Comments are stored in separate file
- Email this back to the author
- Via a new plugin, author will view these comments in context within ASCE and modify the safety case accordingly
- Comments are stored in simple XML (text) file.
  - Could be generated by other non-ASCE systems

# Consolidation of existing functionality

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- V4 is not just about new features
- Multiple undo
  - Everywhere, including plugins
- Improved find and replace
  - Node titles, text, node by node

# General enhancements

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- Drag and zoom
  - Configurable zoom direction
  - Drag to clone
- Link navigation in node editor
  - Ctrl+click to follow link (like MS Word)
  - Back/forwards, like web browser
  - and/or same abilities in node preview
- Actions on multiple nodes in context menu
  - e.g. select a bunch of nodes and
    - add all to user view
    - set properties for all at once
    - run plugin

# Cont'd

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- Show printed page boundaries in main canvas and user views
- Ability to open file read-only if someone else is editing
- New “from template”
- Window management
  - ASCE to remember window position from previous session
  - Start drawing in middle of page, not top left
- User view images
  - Store automatically *if used*
  - update user view images in situ (in node editor)
- Word count tooltips in export path window

# Summary – for vote

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- Drag and zoom
- Link navigation in node editor
- Actions on multiple nodes in context menu
- Show page boundaries
- Open file read-only
- New “from template”
- Window management
- User view images
- Word count tooltips and node preview in export path window

# Voting results

| Feature                                                            | Votes |
|--------------------------------------------------------------------|-------|
| Link navigation in node editor (Ctrl-click) — also in node preview | 9     |
| Drag and zoom on canvas                                            | 7     |
| New files “from template”                                          | 5     |
| Actions on multiple nodes in context menu                          | 4     |
| Show print boundaries on canvas                                    | 2     |
| User view images - smarter management                              | 1     |
| Open file read-only if edited by other user                        | 0     |
| Word count tooltips and node preview in export path window         | 0     |
| Window management (remember position)                              | 0     |