astah gsn

Quick Start Guide

ChangeVision

Introduction

Astah GSN is a design tool to document arguments using GSN (Goal Structuring Notations) plus Mind mapping to visualize thoughts and ideas.
This Start Guide explains basic operations of Astah GSN.

Table of Contents

Models and view elements

Astah GSN consists of four panes:

(1) Management View: has all the menu and frequently-used features as buttons

(2) Project View: consists of the following four views:

Structure view:
For displaying models in the tree view

Map view:
For controlling the view of diagram

Diagram view:
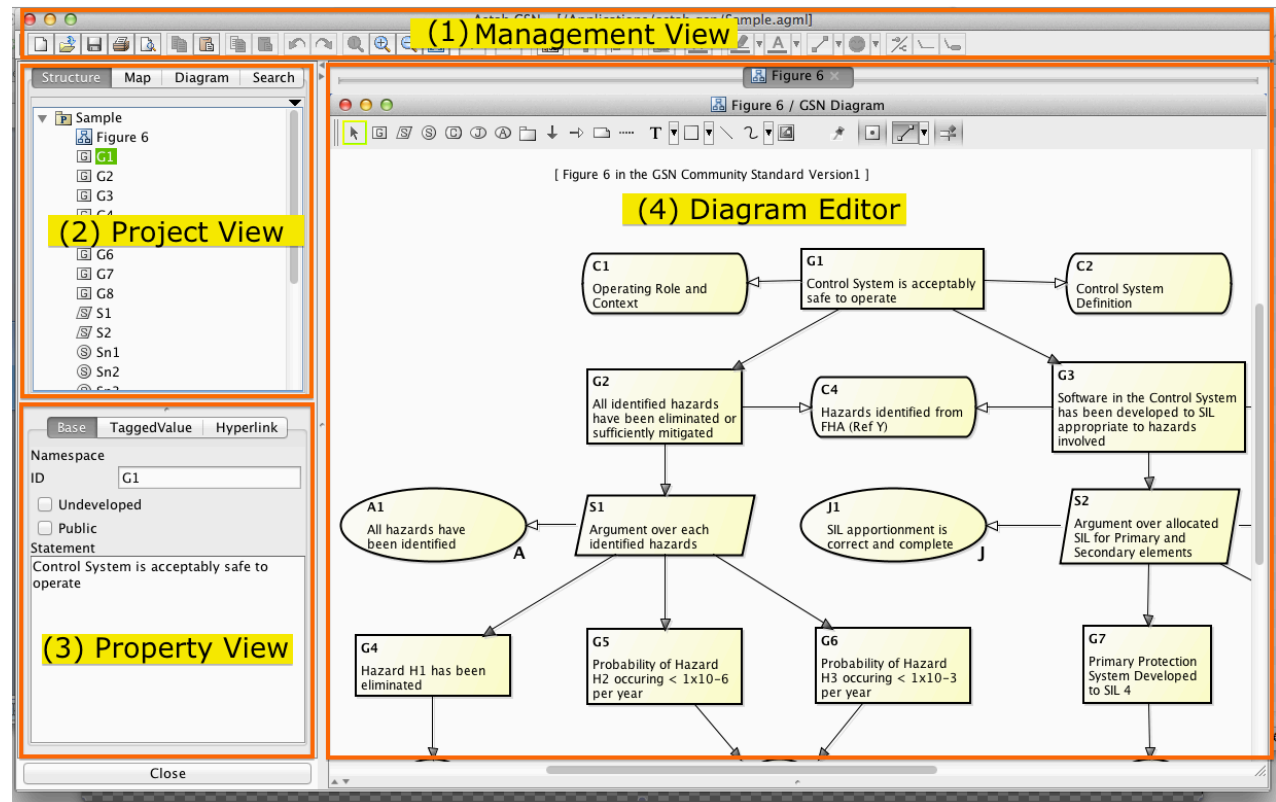Listing all the diagrams

Search view:
For search & replace models

(3) Property View:
is where you add all the detailed model information

(4) Diagram Editor:
is where you draw diagrams

Licensing

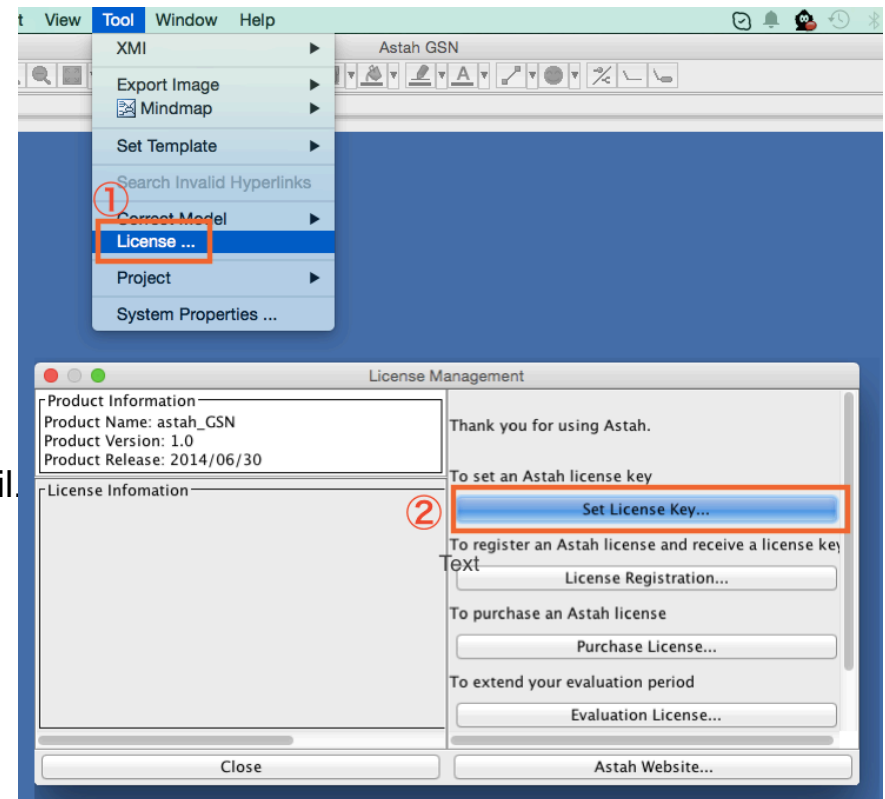Astah GSN can be evaluated for 50 days before purchase.

(1) How to evaluate:

Download Astah GSN from our website and
then first 20 day trial starts right after the installation.
Then 30 day extension can be arranged after the
first 20 days passed.

(2) After purchase

After purchasing Astah GSN license, you will receive
a license number and validation code. Register them
on our ChangeVision members service. Then a
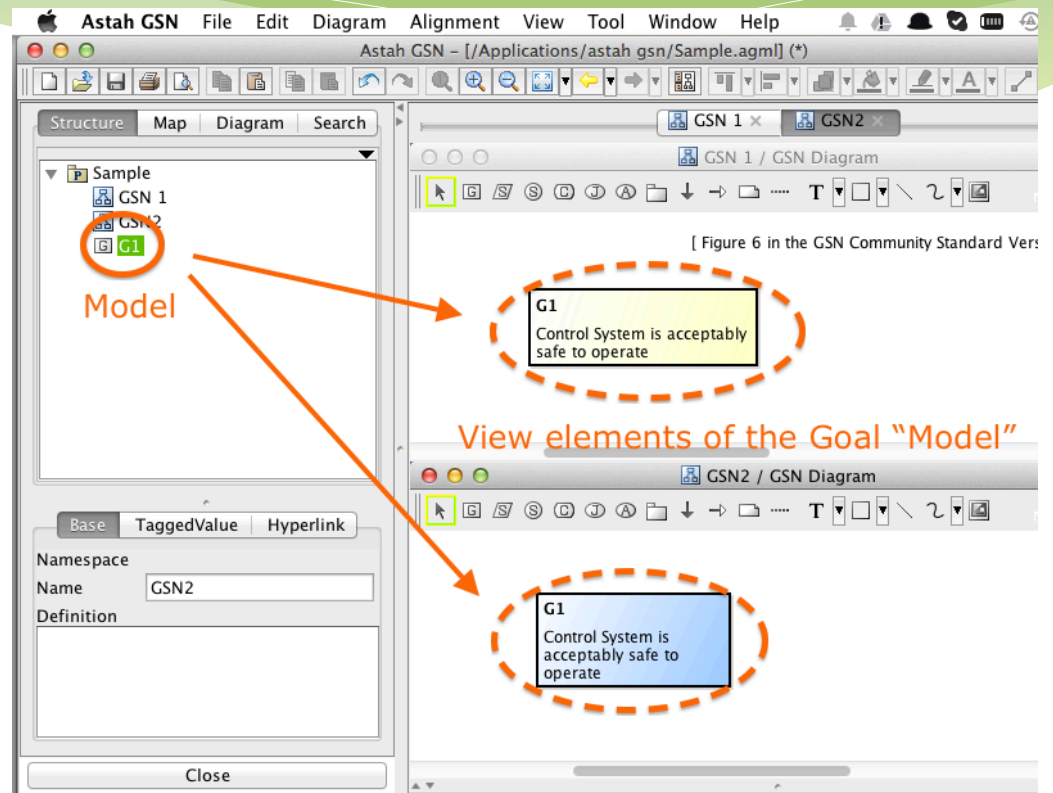license key file (.xml) will be delivered to you via email.

(3) How to set up to Astah

Launch Astah GSN and go to [Tool] – [License]
– [Set License key] then specify the license key
file. (.xml).

Basic Concept:
Models and View Elements

There are two categories for elements:
"Models" and "View elements"

○ "Models" are the elements such as Goals and Strategies that appear in the tree structure.

○ "View Elements" are the elements drawn on diagrams.

○ Single model can be represented in multiple diagrams as view elements.

○ Color and size can be set differently to each view element.

* **Difference between "Delete from Diagram" and "Delete from Model"**

  * "Delete from Diagram" removes selected view elements from diagram and keep models in the project.

  * "Delete from Model" deletes both selected models and the view elements from the project completely.
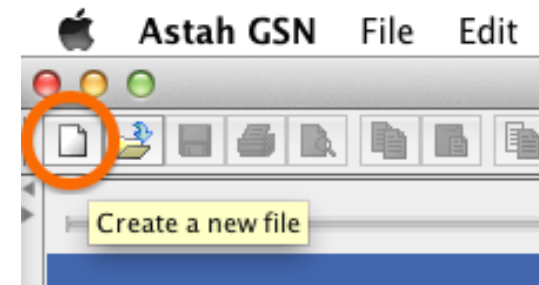
Getting Started:
Creating a project

There are two ways to create a new project.

* **Open a blank file**
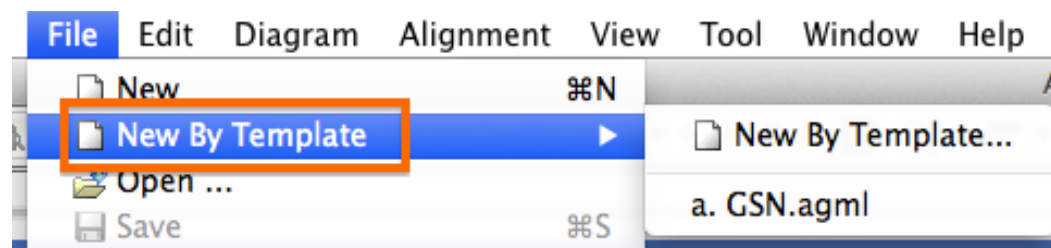 Go to [File] – [New] or click
  [Create New Project] button on tool bar

* **Create a new project with a template file**

  A new project file is created based on the chosen template.
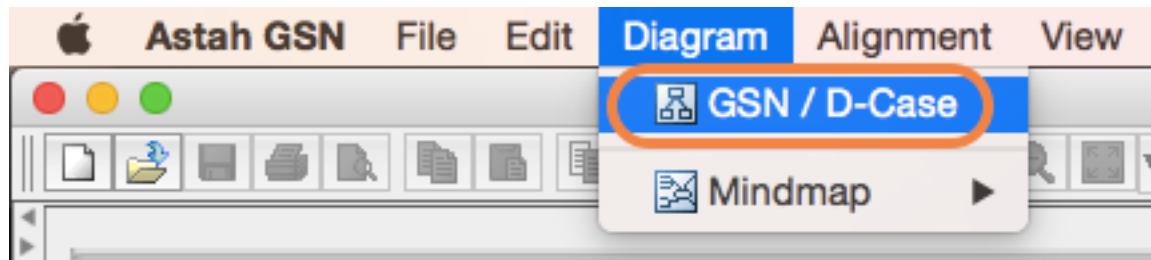
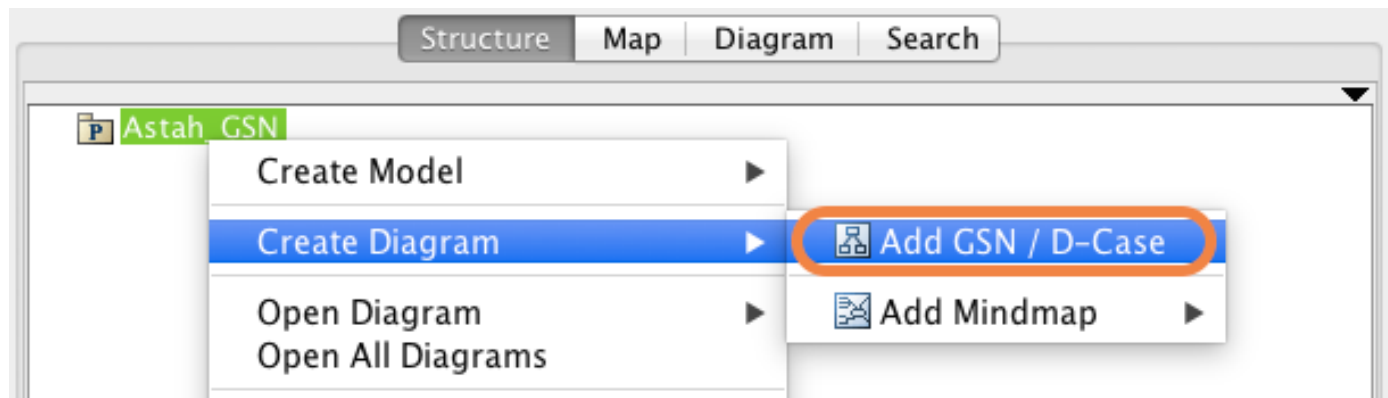 * Go to [File] – [New by Template], and select a template file.

Creating a GSN diagram

There are two ways to create a new project.
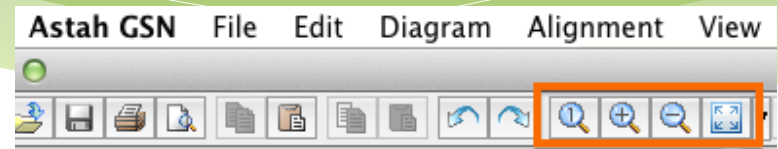
(A) From the main menu : [Diagram] – [GSN Diagram / D-Case]

(B) From context menu in the structure tree : [Create Diagram] – [Add GSN Diagram / D - case]
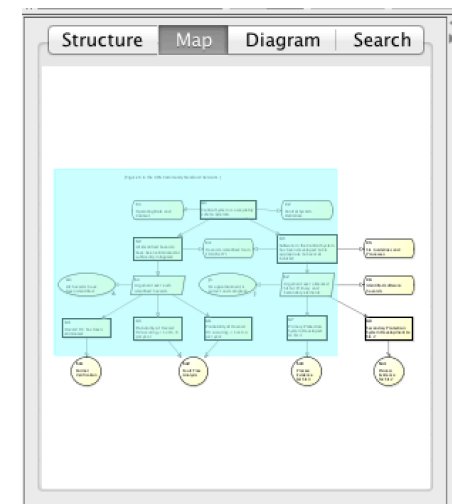
View Operation/Map View

○ **To scroll**
- ○ Right-mouse drag to scroll the whole diagram
- ○ Mouse wheel for vertical scrolling
- ○ Shift ＋ Mouse wheel for horizontal scrolling

○ **To zoom in/out**
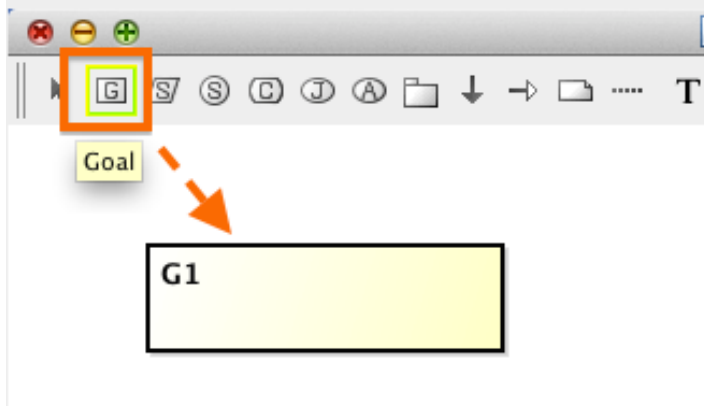- ○ Ctrl + Right mouse drag
- ○ Ctrl＋ Mouse wheel

○ **Control the diagram view in [Map] View**
- ○ The Map View (Shown right) provides a view of the entire contents of an active diagram that is currently opened in the Diagram Editor.
- ○ Left-Drag on Map View can move the location of the display area in the Diagram Editor.
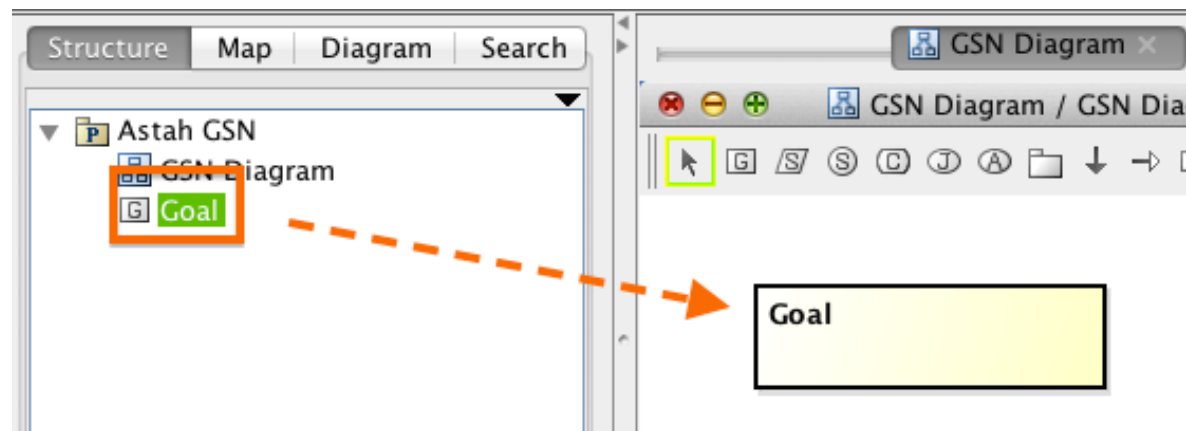- ○ Right-Mouse Drag can specify the size of the display area in the Diagram Editor.

Astah GSN   File   Edit   Diagram   Alignment   View

✳ **Toolbar Buttons**
- ✳ Zoom to the default of 100%
- ✳ Zoom in
- ✳ Zoom out
- ✳ Fit to Window

Structure | Map | Diagram | Search

How to create Models

○ To create a model, choose a model from tool palette, and then click on a diagram

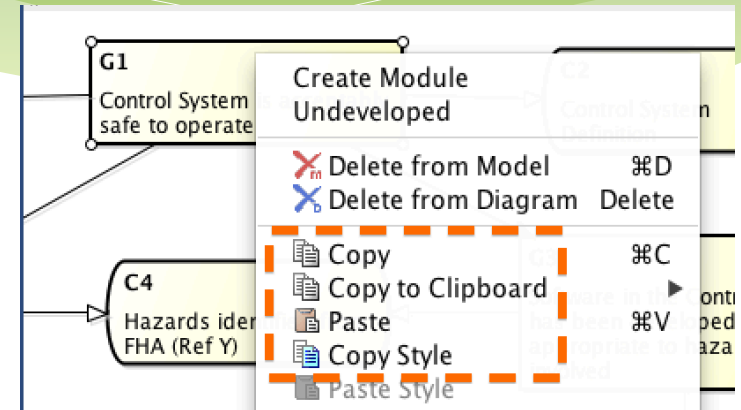○ Double-clicking on the diagram can create a Goal

○ How to create a same model continuously
  ○ Click on the diagram with holding [Shift] key down.
  ○ Click the [Lock] button

You can also drag and drop the model from the tree to the diagram to draw it.
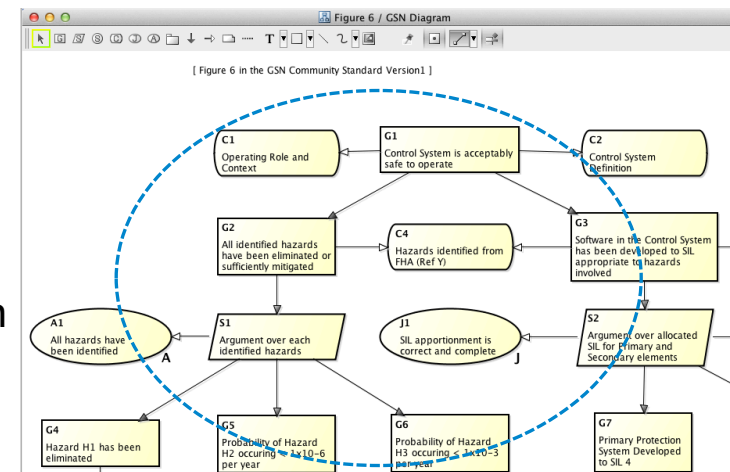
Copy & Paste models

- Copy & Paste models
  - Is available from the context menu or using shortcut key: Ctrl + C (Copy), Ctrl + V (Paste)
- Copy & Paste style of models
  - This copies attributes of models like colors and also available from the context menu or Main Menu under [Edit].
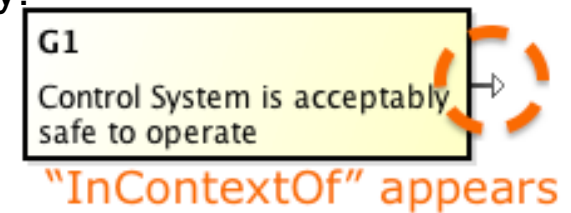
Selecting/unselecting model elements

- How to select multiple models at once
  - Left-drag the area that contains models you want to select
  - Click models with holding [Shift] or [Ctrl] key down
  - Select All : Ctrl + A
- Unselecting
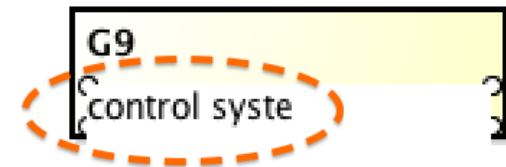 - Re-select models with holding [Shift] or [Ctrl] key down

Suggest Feature

○ Just by moving your mouse over a model, Astah offers suggestions to add other models in/from the model easily.

○ To switch this feature on/off, hold [Shift] key down when selecting view elements.

Renaming view elements

* To rename view elements, select it and hit [F2] or double-click

Moving view elements

○ Select a view element and then left-drag or use arrow keys

○ For moving vertically or horizontally, hold [Shift] key down

○ For snapping to grid, move it with holding [Ctrl] key down

○ For moving per dot, move it with holding [Ctrl] key down and use arrow keys
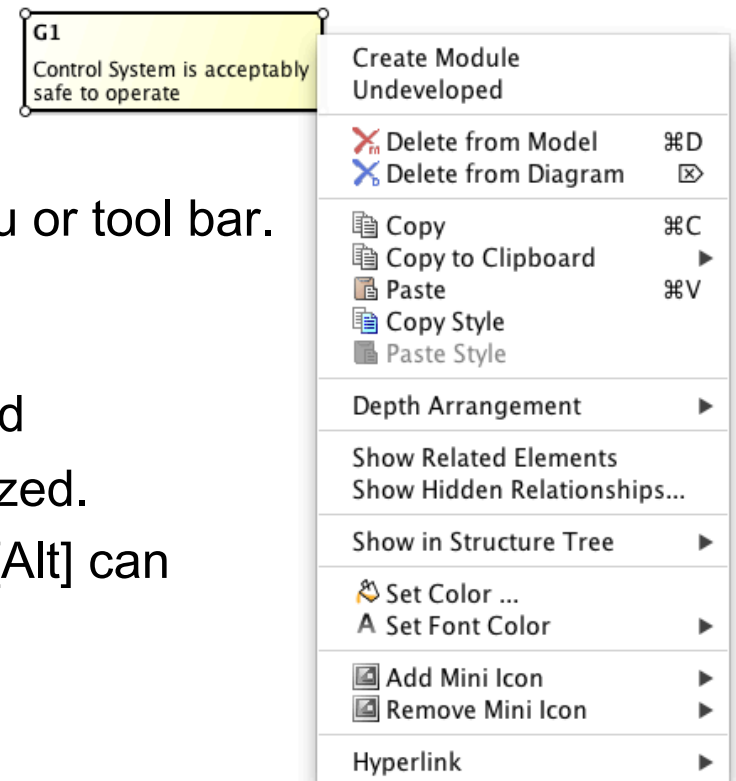
Visibility setting

* Size

  * You can resize view elements by dragging the knobs of any corner of the view elements.

* Color

  * You can set the color from its context menu or tool bar.

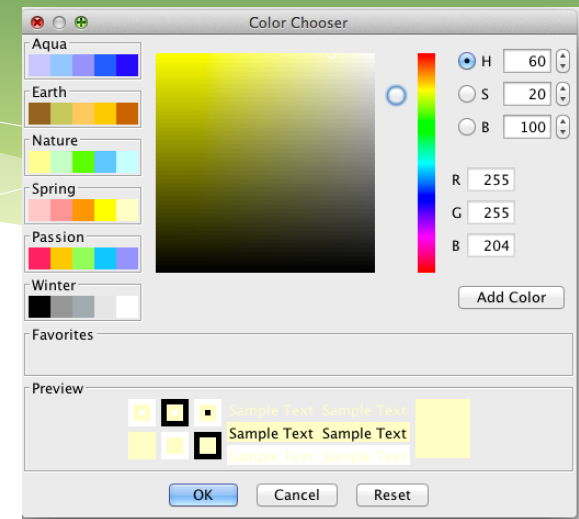## * Wrap text

  * Text such as model names can be wrapped automatically when view elements are resized.
  * [Enter] + [Shift] / [Enter] + [Ctrl] / [Enter] + [Alt] can insert a line.

G1
Control System is acceptably safe to operate

Create Module
Undeveloped

Delete from Model   ⌘D
Delete from Diagram   ⊠

Copy   ⌘C
Copy to Clipboard   ▶
Paste   ⌘V
Copy Style
Paste Style

Depth Arrangement   ▶

Show Related Elements
Show Hidden Relationships...

Show in Structure Tree   ▶

Set Color ...
Set Font Color   ▶

Add Mini Icon   ▶
Remove Mini Icon   ▶
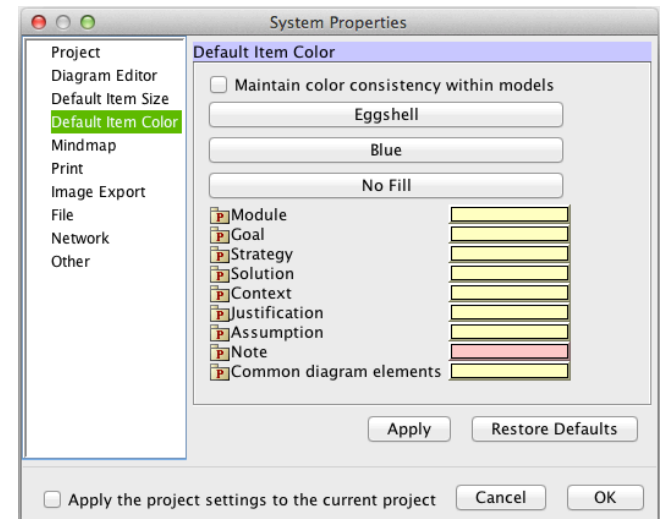
Hyperlink   ▶

Color setting

To set color to view elements, go to [Edit] – [Set Color] from Main Menu or choose [Set color] from Context menu of selected view element.

Default color setting

○ [Tool] - [System Properties] – [Default Item Color]

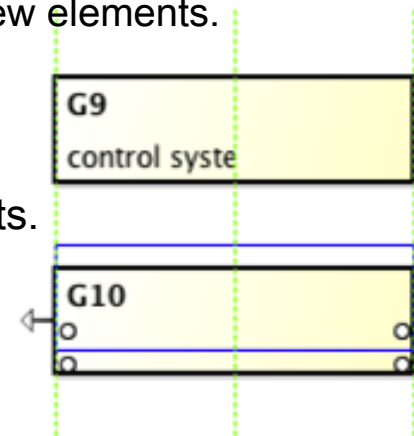○ Default Color setting can be made per project or Astah GSN itself.

Align view elements

* **Alignment Guide**
  * Alignment assist guide line appears automatically when moving view elements. (Green dotted line in the right figure.)
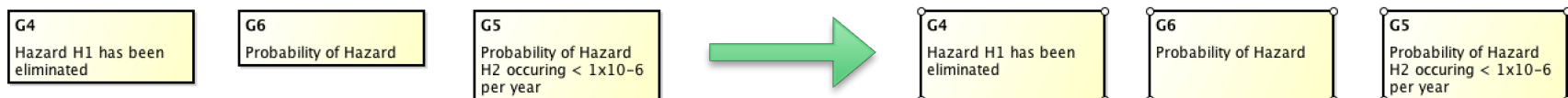
* **Align selected view elements**
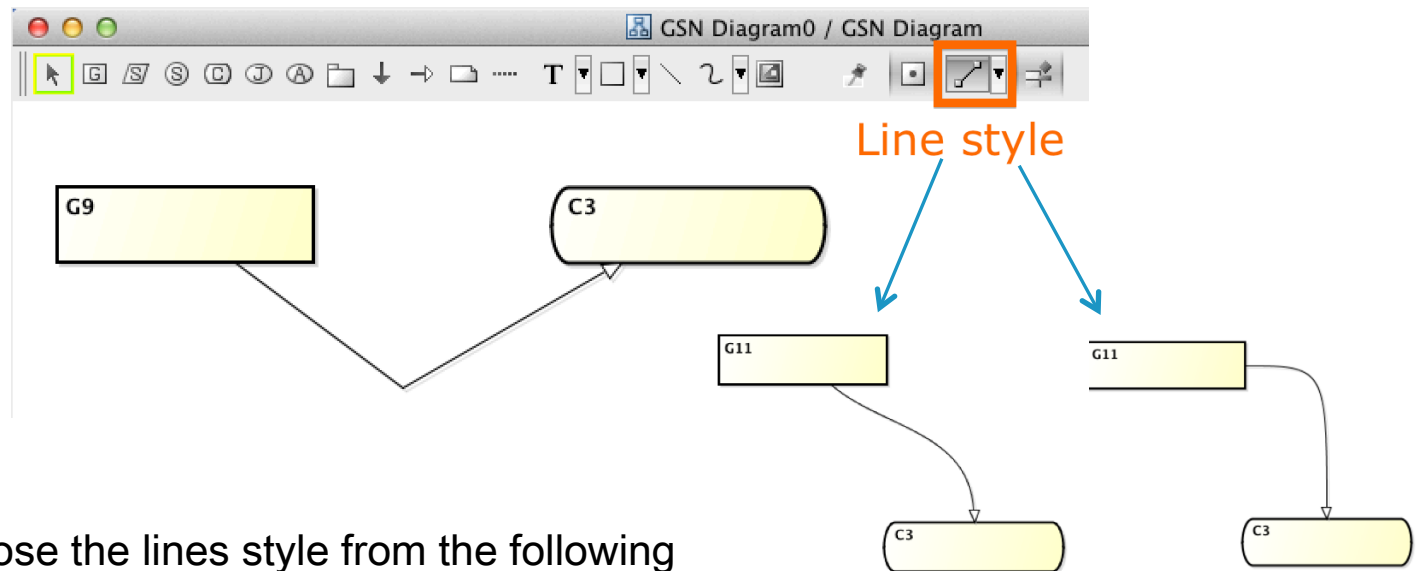 * [Alignment] from Main menu helps align selected view elements.

Adjust size of view elements

○ [Alignment] – [Adjust Size] from Main menu can adjust view elements size to make them look nice all together.

Creating lines

* GSN has some line elements such as SupportedBy、InContextOf. Here's how to create them:

    1. Select the line element you want to create from Tool palette
    2. Click the origin of the view element and click the target element.

        • [ESC] or right-click can cancel the creation of the line after you clicked the first view element
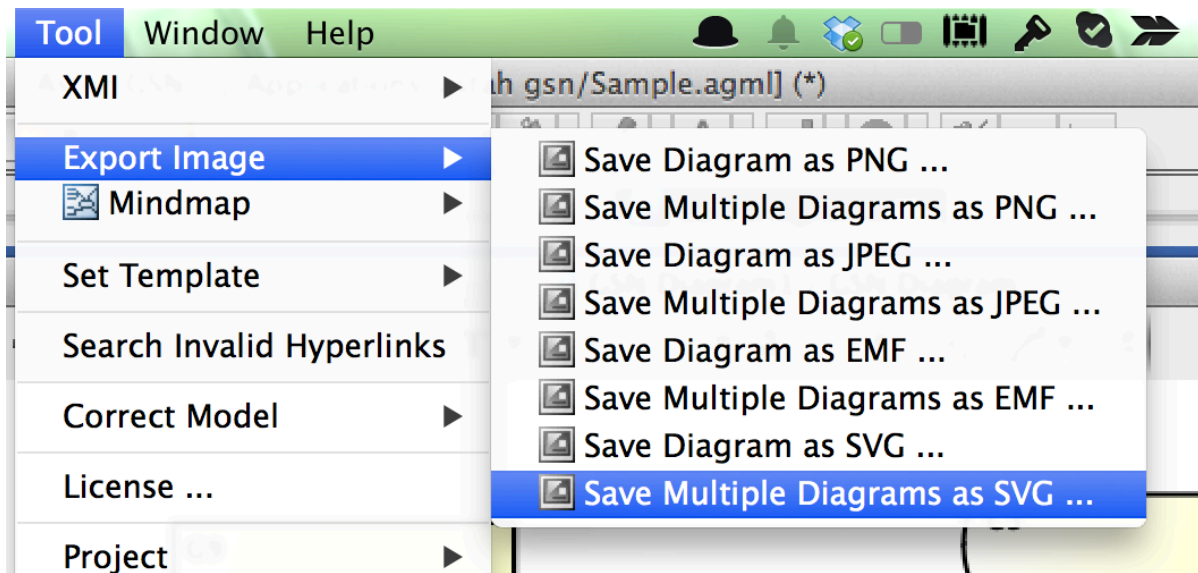

○ Line Style

    ○ You can choose the lines style from the following

        4 types: Line, Line (Right Angle), Curved, Curved (Right Angle)

Export to image files

* [Tool] – [Export Image] can export diagram to image files into PNG, JPEG, EMF or SVG.

* [Copy to Clipboard] from view element's context menu will copy models as image files as well.

Printing

* Print

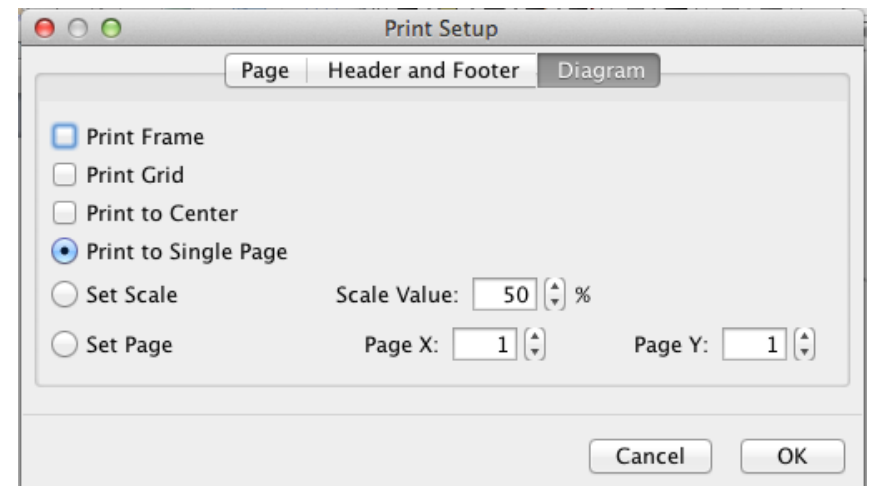   * Simply print diagrams that are currently open.

* Print multiple diagrams

    * Print all or selected diagrams within a project. You can sort the diagrams in order to print by diagram name, diagram type..etc.

* Print preview

    * Preview the diagram(s) before print

* Print setting

    * Configure the print properties per project or each diagram individually.

    * Add header, footer, paper size and zoom in/out
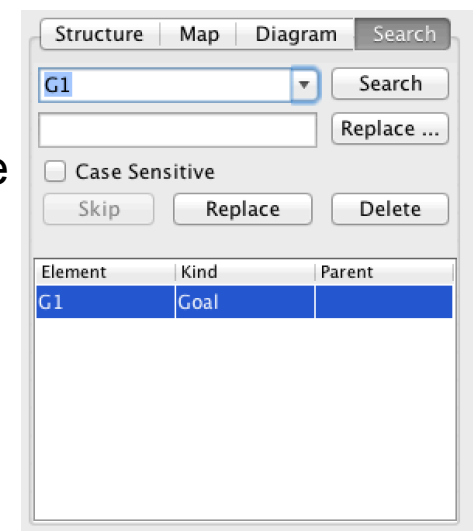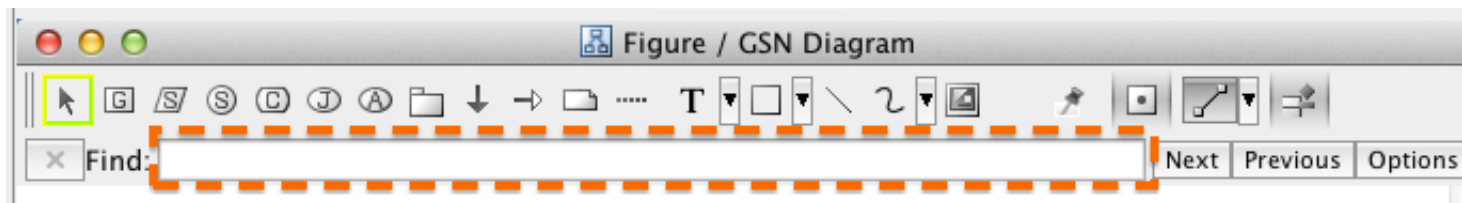
Search and replace

* In the [Search] tab, you can search and replace model names.

* ### What you can search:
  Other than searching "by text", you can list up the
  models that exist only in the structure tree but
  not on the diagrams and also invalid hyperlinks
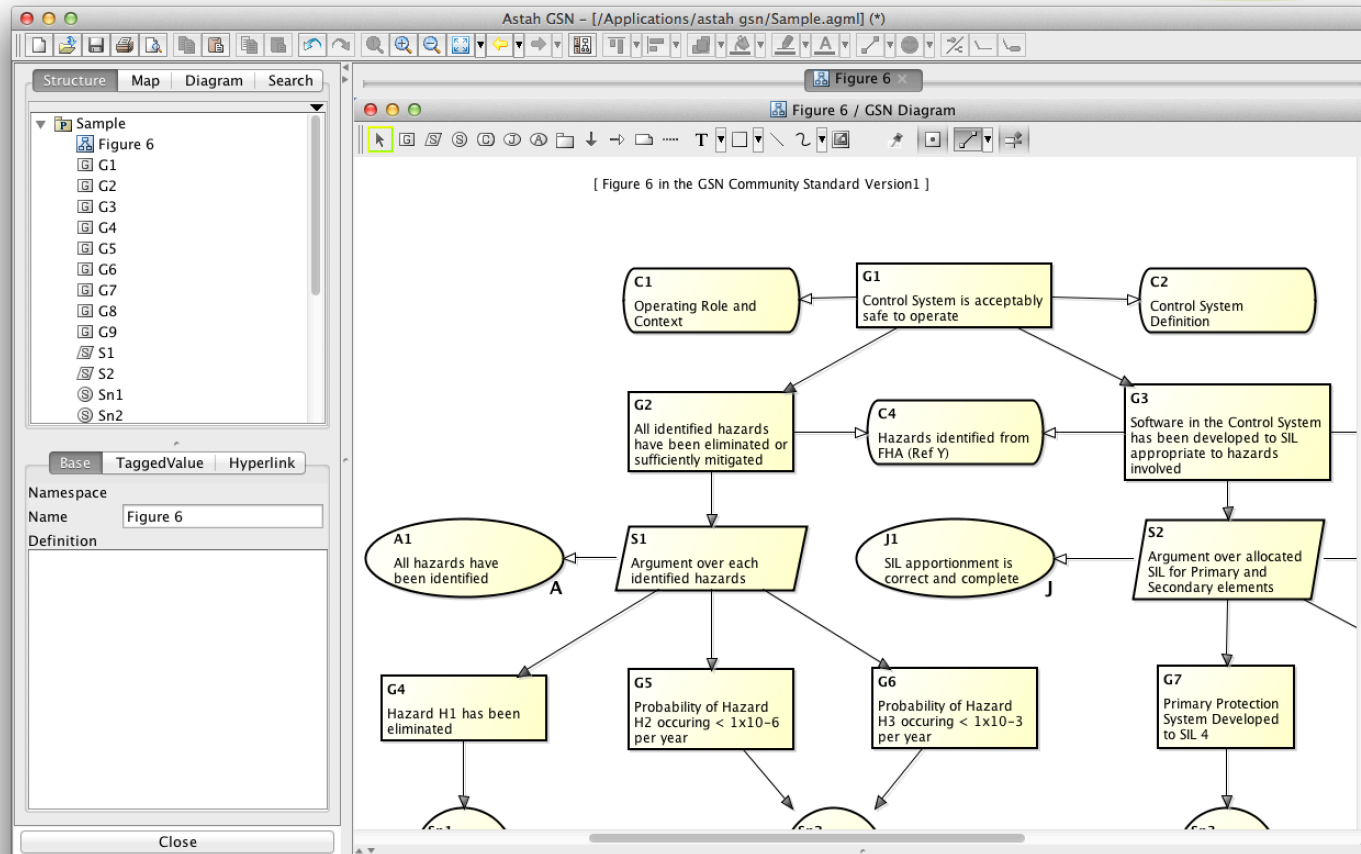 (When the target link is lost).etc.

* To search text on the diagram, use [Ctrl+F]

Supported Diagram – (1) GSN

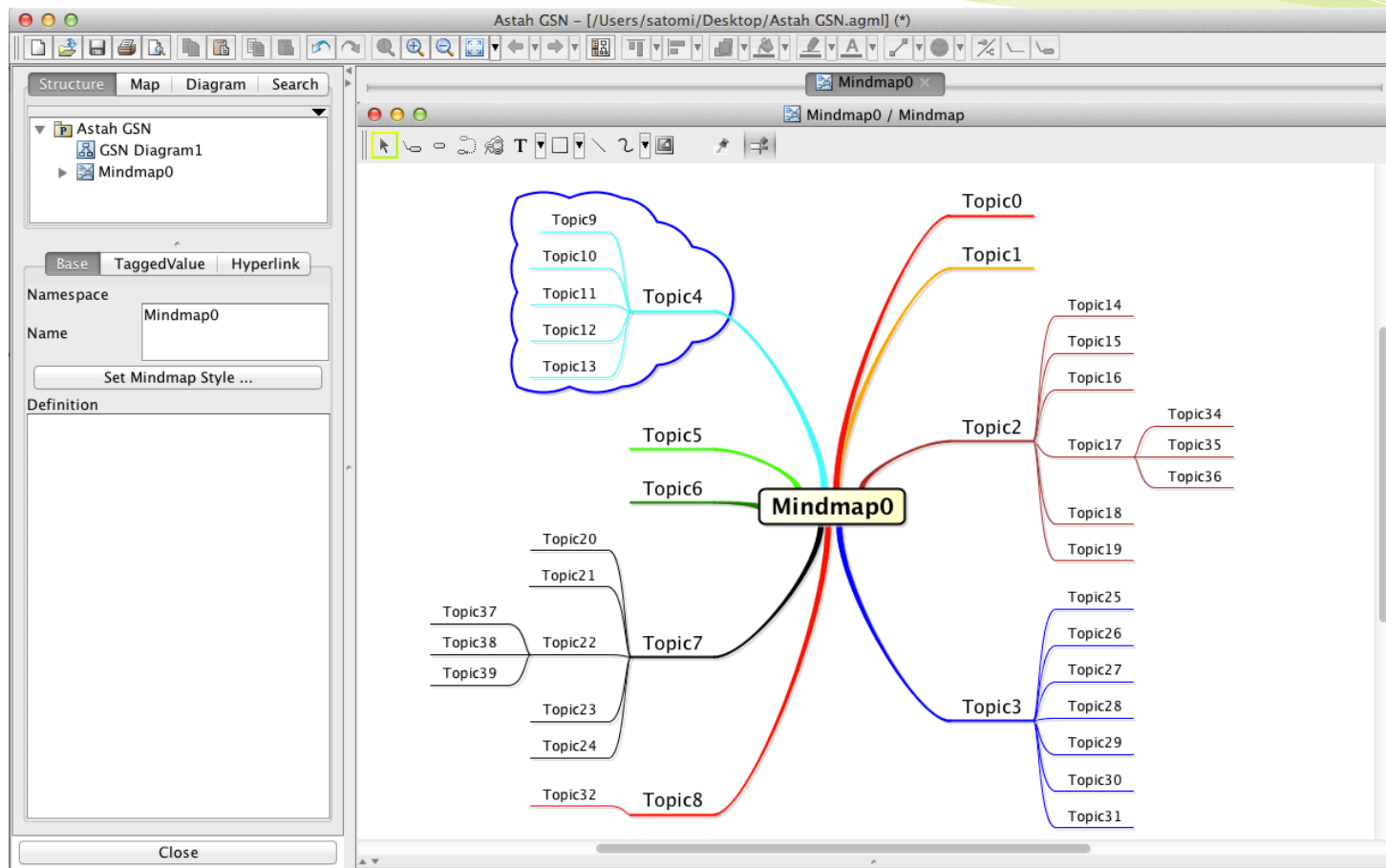GSN Diagram lets you draw the structure of arguments using GSN (Goal Structuring Notation) which is a graphical argumentation notation.
Sample GSN diagram is stored in Astah GSN installation folder (File name:Sample.agml)
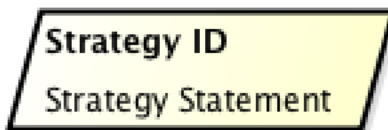
Supported Diagram - (2) Mind Map

There are countless ways to use Mind Map – for brainstorming, taking minutes, jotting down ides…etc. Mind Map topics can be converted to GSN models.

What is GSN？

* GSN (Goal Structuring Notation) is a graphical argumentation notation to explicitly document the individual elements of arguments such as goals, solutions, contexts and its relationships. Documenting and visualizing the arguments with this graphical notation can help provide assurance of critical properties of systems, services, organization's safety and security and any other properties to bring the best and proper solutions.

* With GSN, first you will have a top goal and then break it down to other goals in lower level which are essential to achieve the top goal and build the structure hierarchically. If there are no more goals to break down, you can indicate so using the element called "Solutions". Also GSN has following elements such as "Strategy" of the goals, "Assumptions", "Justifications" and "Context" to give the contextual information to visualize the structure of arguments. This makes it easier to find lack of information and evidences that are not convincing enough and also to explain the arguments to the third parties. Therefore, GSN can be used not only for Safety cases but also for Security, Dependability and in any general arguments.

Model elements in GSN (1)

Goal ID

Goal Statement

Strategy ID

Strategy Statement

Solution ID

Solution Statement

* Goal
  * Presents a claim forming part of the argument.

* Strategy
  * Describes the nature of the inference that exists between a goal and its supporting goal(s).

* Solution
  * Presents a reference to an evidence items (mainly goals).

Model elements in GSN (2)

Context ID

Context Statement

Justification ID

Justification Statement

J

Assumption ID

Assumption Statement

A

* Context
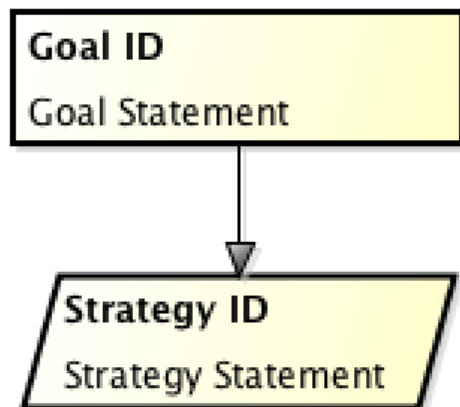 * Presents a contextual artifact. Can be a reference to contextual information or a statement.

* Justification
  * Presents a statement of rationale.

* Assumption
  * Presents an intentionally unsubstantiated statement.

Model elements in GSN (3)

* SupportedBy
    * Declares the relationships between goal and its inferential or evidential contexts.
    * Permitted connections:
        * Goal to Goal
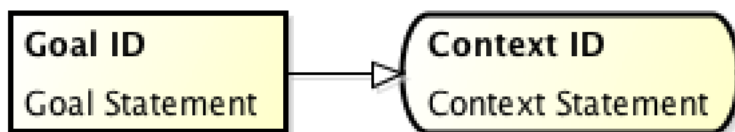   * Goal to Strategy and vice versa
        * Goal to Solution

Model elements in GSN (4)
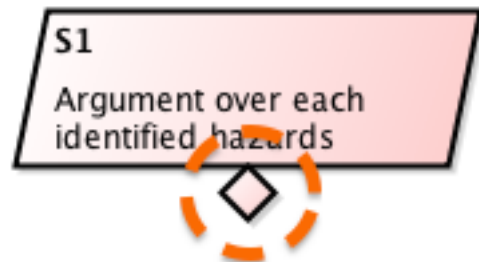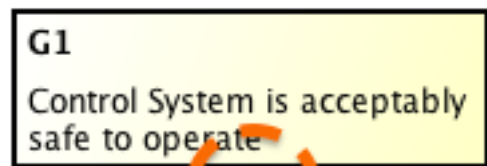
* InContextOf
  * Declares a contextual relationship
  * Permitted connections:
    * Goal to context
    * Goal to Assumption
    * Goal to Justification
    * Strategy to Context
    * Strategy to Assumption
    * Strategy to Justification

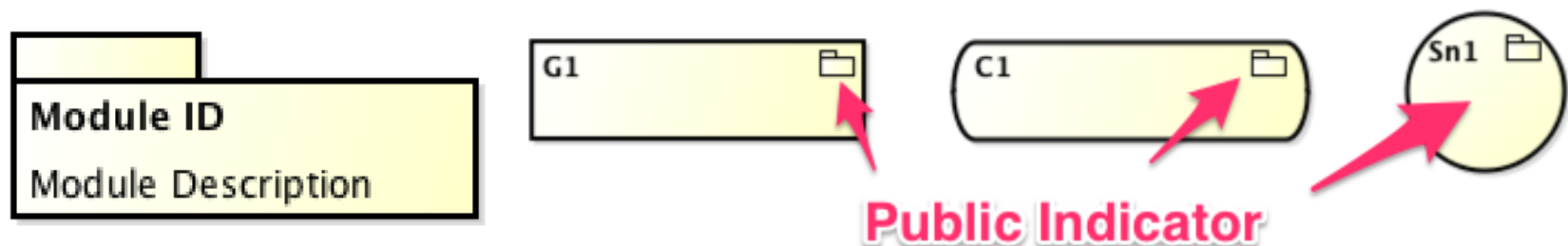| Goal ID	Context ID
Goal Statement	Context Statement

Model elements in GSN (5)

Undeveloped

* "Undeveloped" is notated as a diamond at the bottom of the elements.

* If it was added to the Goal, that presents that the Goal is intentionally left underdeveloped in the argument.

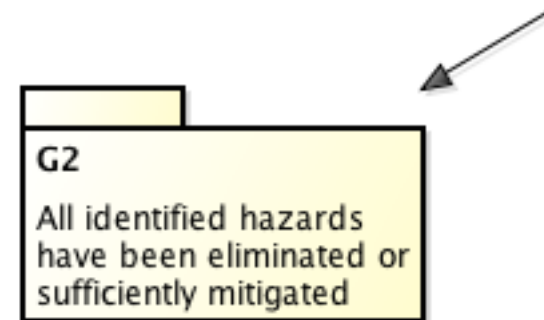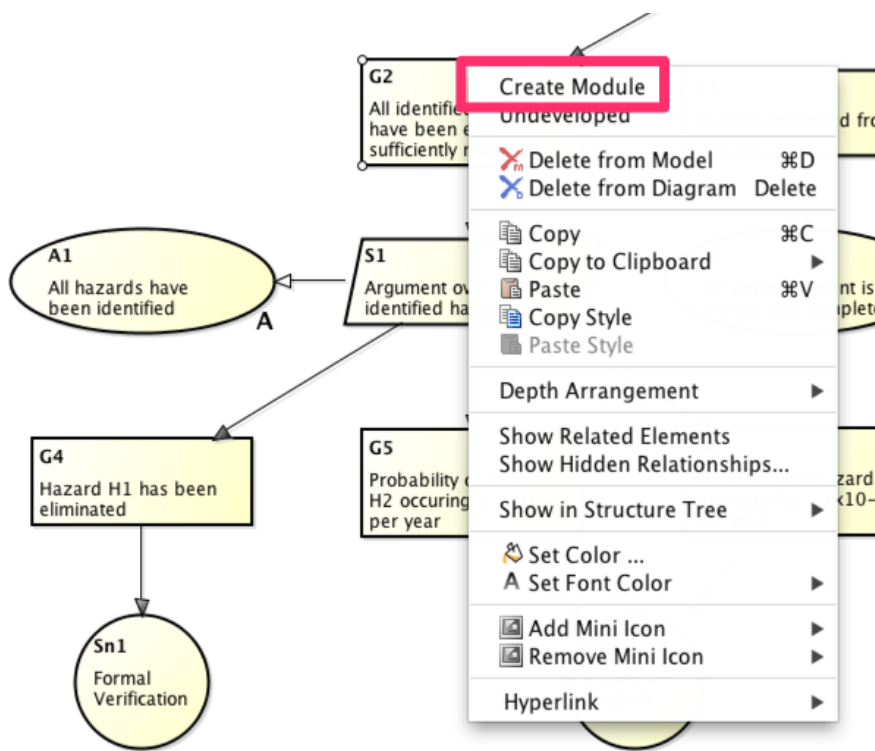* If it was added to other models, that indicates that a line of argument has not been developed

Module

* Astah GSN supports Modules that can re-use the argumentation. Specifying Modules and Public Indicators, connection using SupportedBy and InContextOf are supported.
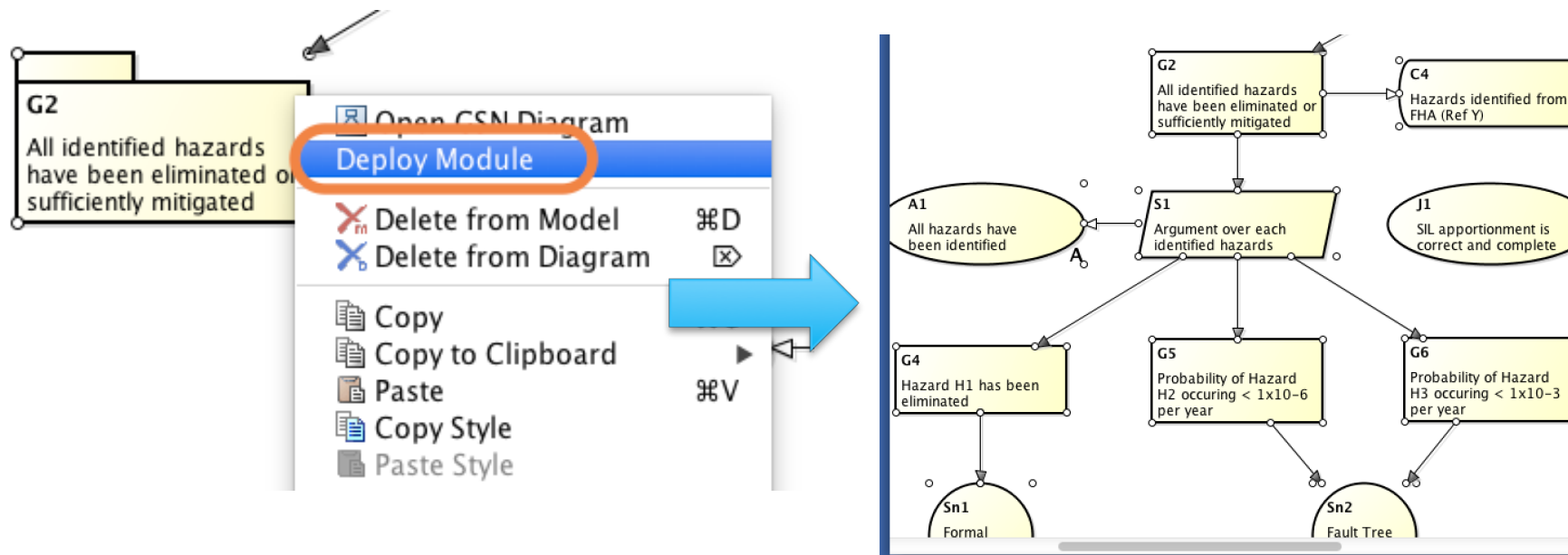
Creating Module from Goal

(1) Select [Create Module] from Goal's context menu

(2) The Goal turns into a package-looking icon and all the models under the Goal will disappear. To see the original structure, simply double-click it.
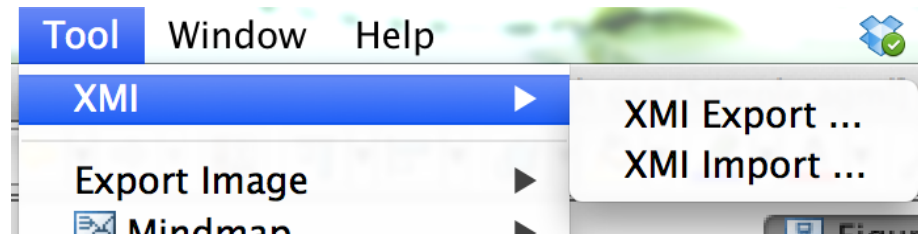
Deploy the Module

Select [Deploy Module] to show the original structure.

XMI Import/Export

* You can export GSN models into SACM (Structured Assurance Case Metamodel XMI

* When importing XMI, a Module will be created based on the selected XMI's Argument and GSN models will be imported under the Module.

Shortcut key list

	Function	Key
Edit	Select All	Ctrl + A
	Delete from Model	Ctrl + D
	Delete from Diagram	DELETE
	Undo	Ctrl + Z
	Redo	Ctrl + Y
	Copy	Ctrl + C
	Copy to Clipboard as BMP, JPG	Ctrl +Alt + C
	Paste	Ctrl + V
	Rename	F2

	Function	Key
File	Create new	Ctrl + N
	Save	Ctrl + S
Window	Switch Diagram	Ctrl + Tab
	Show Project View (Left pane)	Ctrl + Shift + P
Align	Align center	Ctrl + Alt + I
	Align horizontally	Ctrl + Alt + —
	Align Top	Ctrl + Alt + ↑
	Align bottom	Ctrl + Alt + ↓
	Align right	Ctrl + Alt + →
	Align left	Ctrl + Alt + ←
Zoom	100% Zoom	Ctrl + 1
	Fit in screen	Ctrl + 0
	Zoom in	Ctrl + Wheel up, Ctrl + [、Ctrl + Drag right-up
	Zoom out	Ctrl + Wheel down, Ctrl+ [,Ctrl + Drag right-down

Our Online Contents

✳ Astah GSN Tutorial

http://astah.change-vision.com/astah-gsn-document.var

✳ Facebook page

http://www.facebook.com/astah.changevision

✳ Astah GSN Community Site Forum

http://astah-users.change-vision.com/ja/astah-gsn-community.var

Communicate with other users of Astah!

✳ Twitter   @astah_en

✳ Contact

astah-gsn@astah.net