

EPE 2.0

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Edinburgh Pathway Editor (EPE)

The screenshot displays the Edinburgh Pathway Editor (EPE) interface. The top window shows a 3D molecular model of the STKE PI3K pathway, with various proteins and molecules like ATP, ADP, and Pi. The bottom window shows a 2D schematic diagram of the same pathway. A tooltip for PI3,4,5P3 is visible, providing a description and citations.

Property Value

Property	Value
Backgr...	RGB (238, 188, ...
Fit to l...	Off
Foregr...	RGB (0, 0, 0)
Help T...	Name: \$STKE...
Hover...	\$STKEname\$
image	
image o...	Top-Left
Line st...	Solid
Line ...	1
Location	[180,600]
Size	[120,40]
SL	plasma membra...
STKEacr	PI3,4,5P3
STKE	CMN_6567
STKEc...	[text1, text2, tex...
STKEd...	This record co...

Name: Phosphatidylinositol-3,4,5-trisphosphate

Description: This record contains information about the Phosphatidylinositol-3,4,5-trisphosphate (PI3,4,5P3) component in the context of the PI3K Pathway. Phosphatidylinositol-3,4,5-trisphosphate [PI(3,4,5)P₃] is a lipid product of phosphoinositide 3-kinase (PI3K) produced by phosphorylation of phosphatidylinositol-4,5-bisphosphate [PI(4,5)P₂] at the 3' position of the inositol ring.

Citations:
Cantley, L.C., Auger, K.R., Carpenter, C., Duckworth, B., Graziani, A., Kapeller, R., and Soltoff, S. (1991) Oncogenes and signal transduction [published erratum appears in Cell 1991 May 31;65(5): following 914] Cell 64:281-302.
Auger, K.R., Serunian, L.A., Soltoff, S.P., Libby, P., and Cantley, L.C. (1989) PDGF-dependent tyrosine phosphorylation stimulates production of novel polyphosphoinositides in intact cells. Cell 57:167-75.



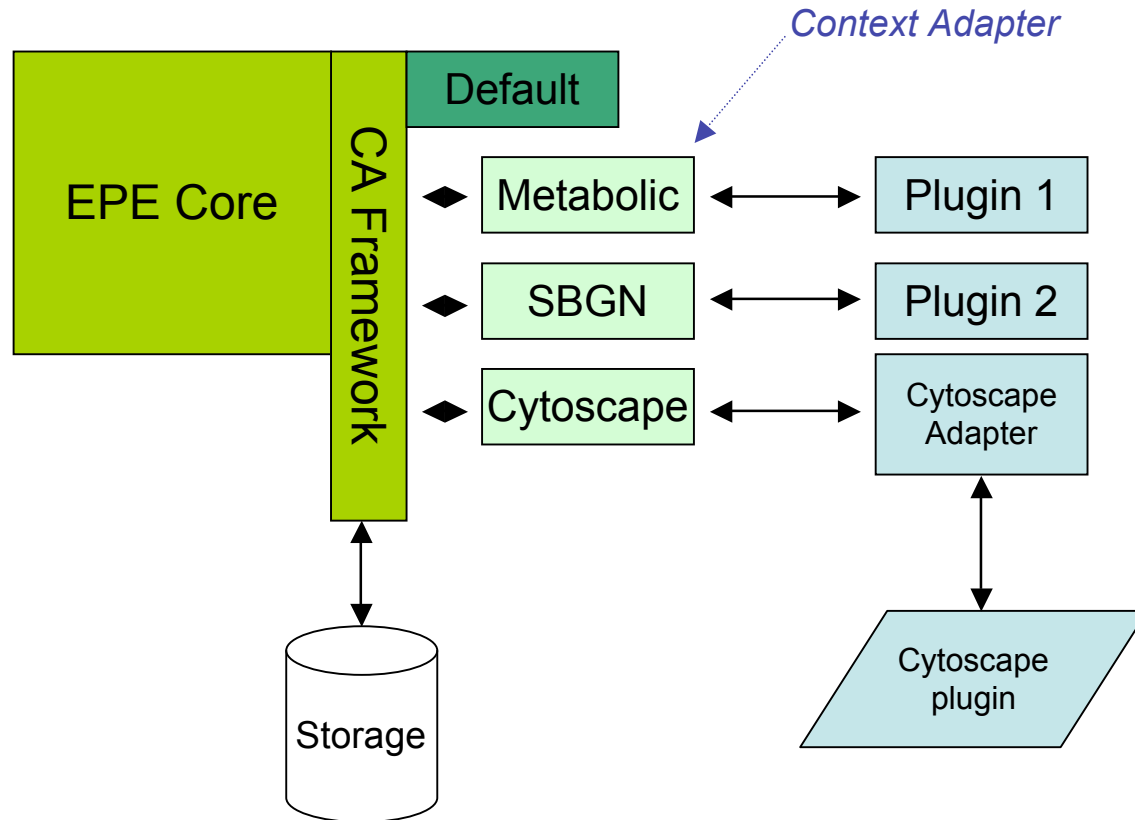
<http://www.bioinformatics.ed.ac.uk/epe/>

What Does it/Will it Do?

- Draw biological pathways (EPE1)
- Supports multiple graphical notations (EPE1)
- View multiple maps simultaneously (EPE1)
- Will provide integration with SB tools (EPE2)
- Data export & import (EPE2)
 - SBML (EPE1)
 - BioPAX L3
- Extensible (EPE2)
 - Plugins (as cytoscape model)
 - Will provide 3rd party plugin API



A New EPE Architecture

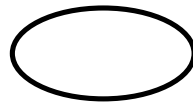


Context Adapter Services

- Notation definition
 - Palette definition
 - Notation specification
- Notation validation and warnings
- Notation DOM
- Context conversion
- Context versioning
- Autolayout
- Import/Export

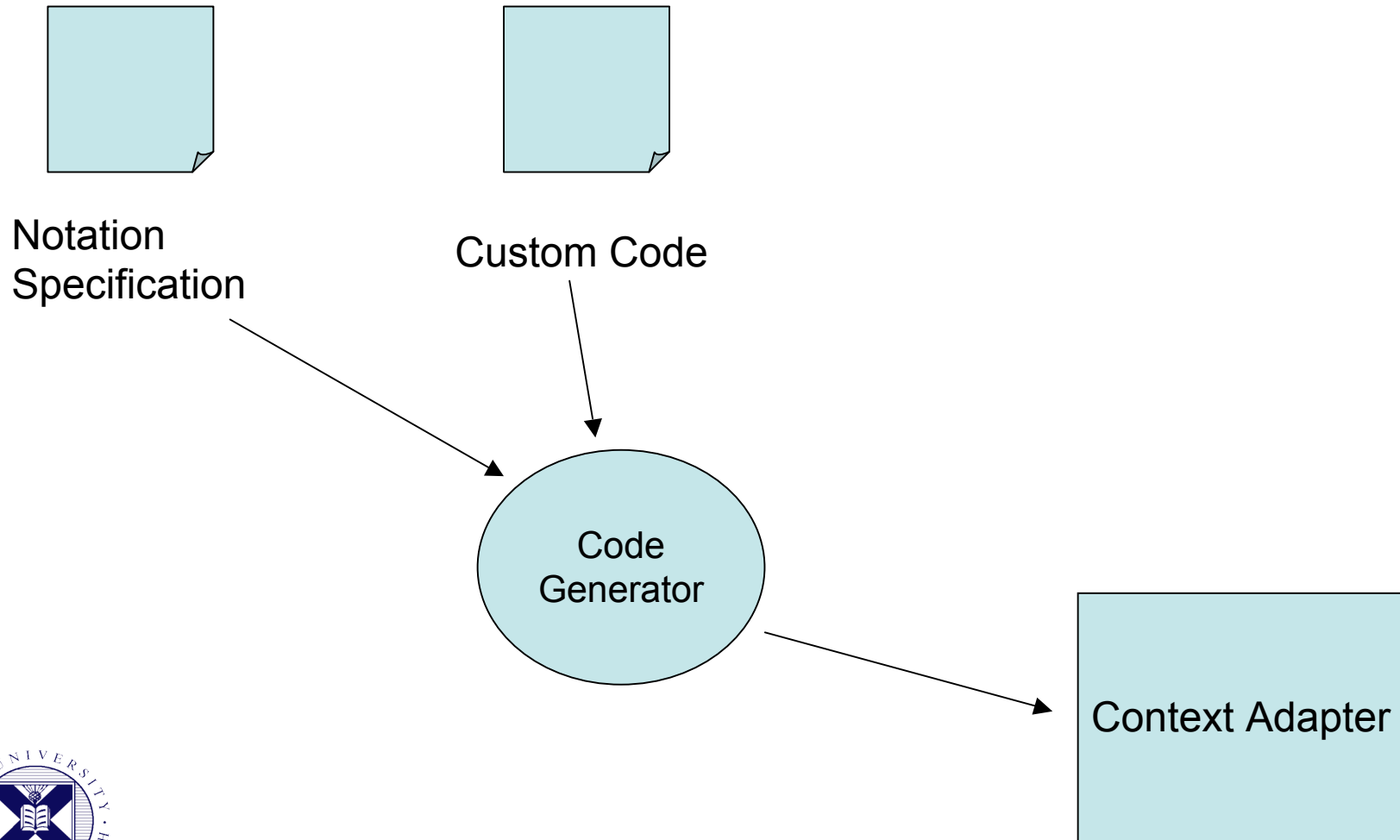


Notation Definition: Shapes & Links

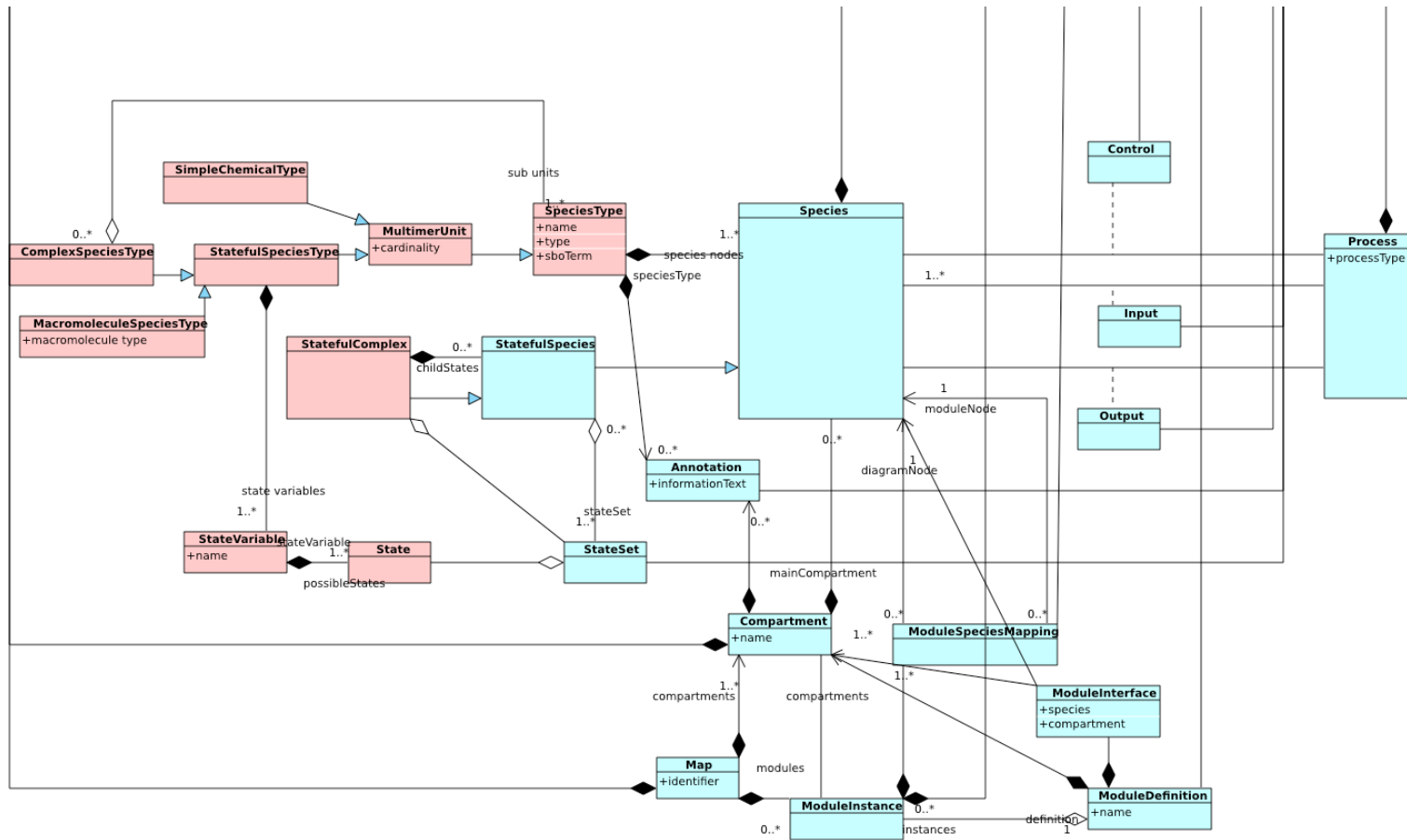


- Macromolecule
 - Shape: rounded rectangle
 - Line width: 2
 - Line Colour: Black
- State Variable
 - Shape: ellipse
 - Line width: 2
 - Child of Macromolecule
- Consumption Link
 - Line pattern: solid
 - Target Arrowhead: None
 - Source: Macromolecule
 - Target: State Transition

CA Code Generator



Notation DOM



EPE Release

- 1st Public Release – Spring 08
- ‘Alpha’ release - end Jan 08

