Node based interfaces

Below is a list of node based interfaces; some of these programs/node based editors have been around for a while and likely already ran into issues we'll find in the future (providing we go with a node based interface). The documentation links often provide more information on how the interface works - we can grab ideas from there.

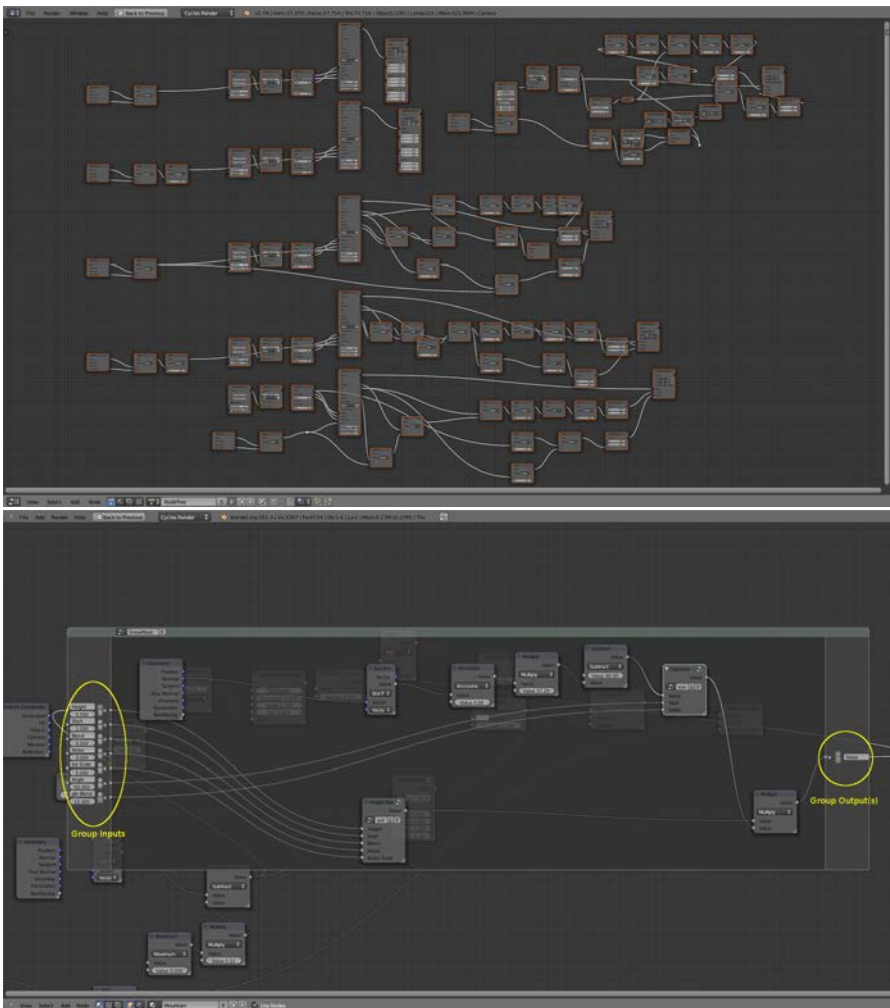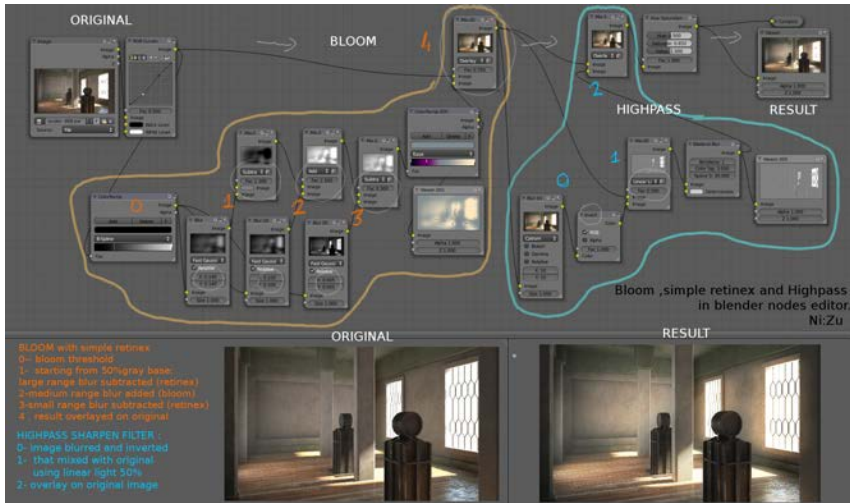## 3D modelling programs

Blender

The node based interface is used to assign/create complex materials and have a real time preview of the changes.

Documentation: https://docs.blender.org/manual/en/dev/render/blender_render/materials/nodes/introduction.html

Download: https://www.blender.org/download/

Screenshots

Node arrangement and expand/collapse of nodes (towards the end)

Auto-offset moves nodes as needed (new nodes added, nodes removed, etc): http://blender-manual-i18n.readthedocs.io/ja/latest/editors/node_editor/usage.html

Node wrangler - improvements to Blender's node editing: http://gregzaal.github.io/node-wrangler/
See lazy Functions > Lazy Connect with Menu as an alternative way of connecting nodes without dragging/dropping from/to their sockets
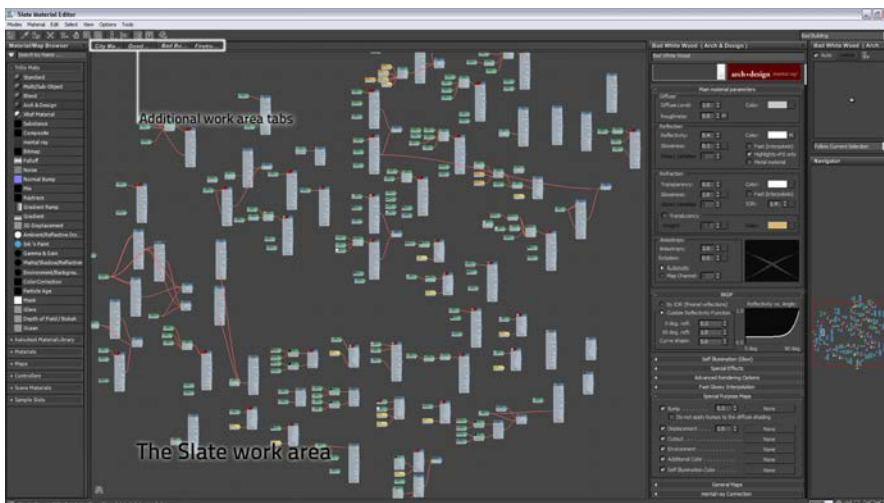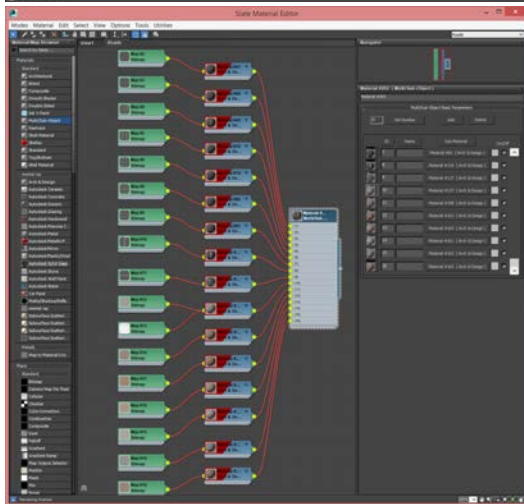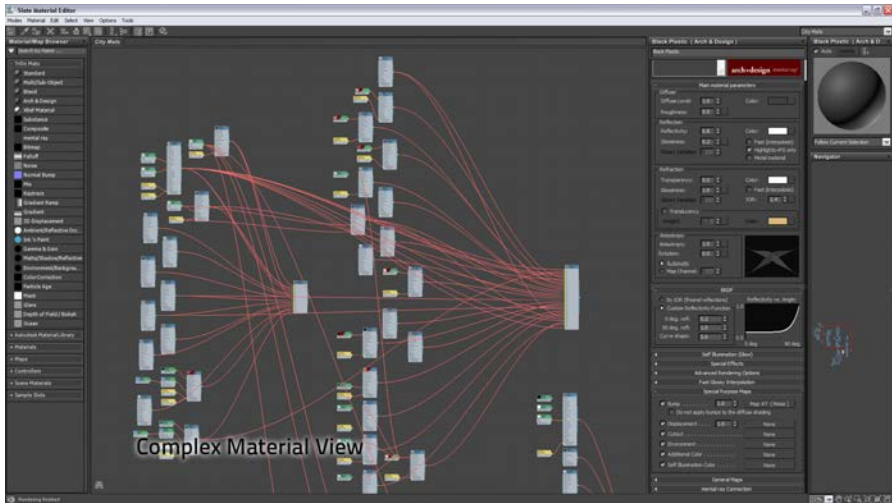
3DS Max

Slate - also used to work with materials

Documentation: https://knowledge.autodesk.com/support/3ds-max/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/3DSMax/files/GUID-7B51EF9F-E660-4C10-886C-6F6ADE9E8F56-htm.html

A brief overview (last post in page), potential good ideas: http://www.design-corps.co.uk/tag/interface/
"To combat the confusion with complex scenes you have the option of creating new workspaces to keep things organised, these just sit at the top as tabs for you to flick between." - our idea of tabbing between collections
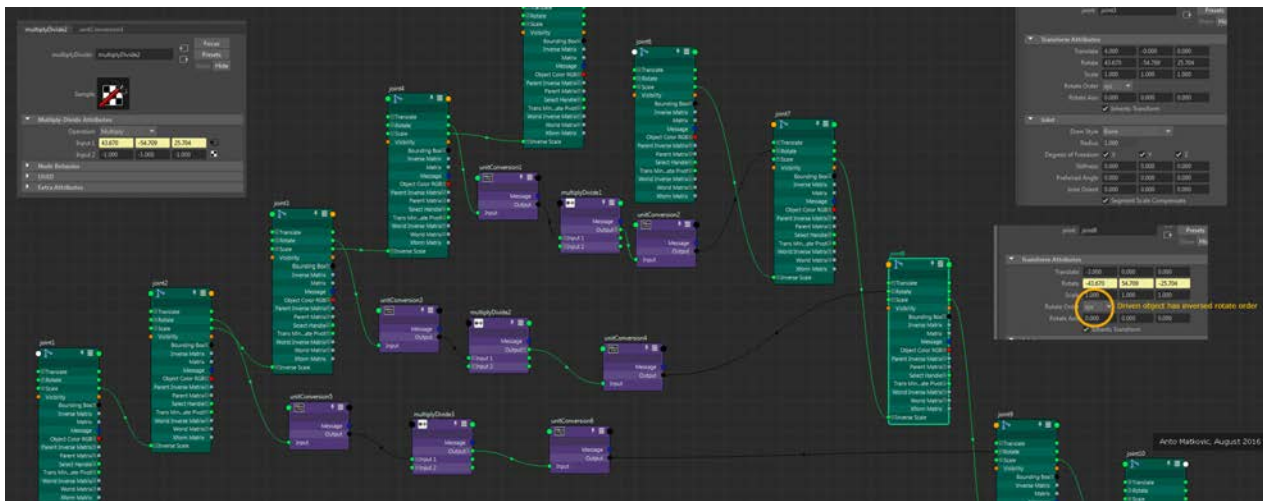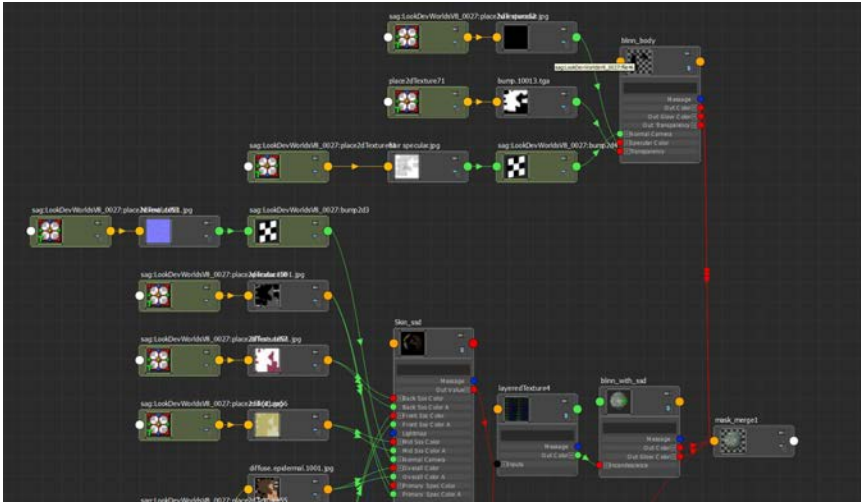
Screenshots

Complex Material View

Maya

Also material editing, character rigging

Documentation: https://knowledge.autodesk.com/support/maya/learn-explore/caas/CloudHelp/cloudhelp/2016/ENU/Maya/files/GUID-383D6D2A-DE9A-4764-9DE0-6514718A1578-htm.html
Idea of bookmarks "You can create bookmarks in the Node Editor to store the current node graph as a quick reference."

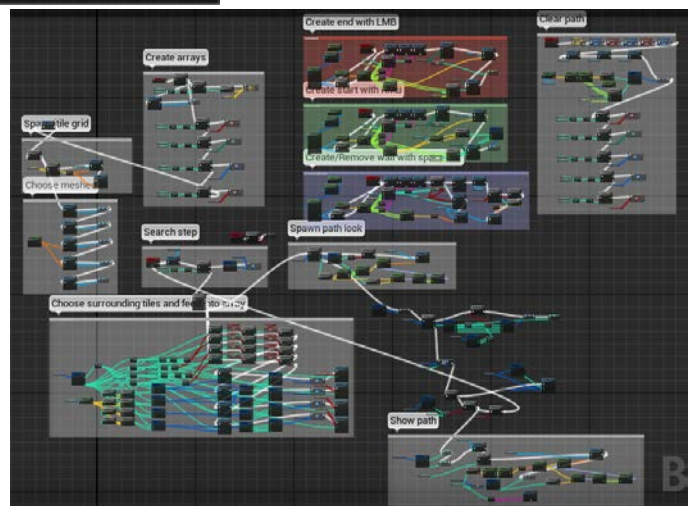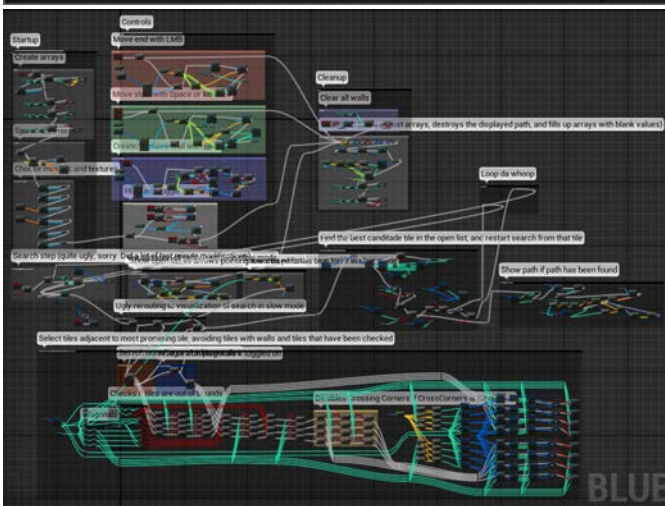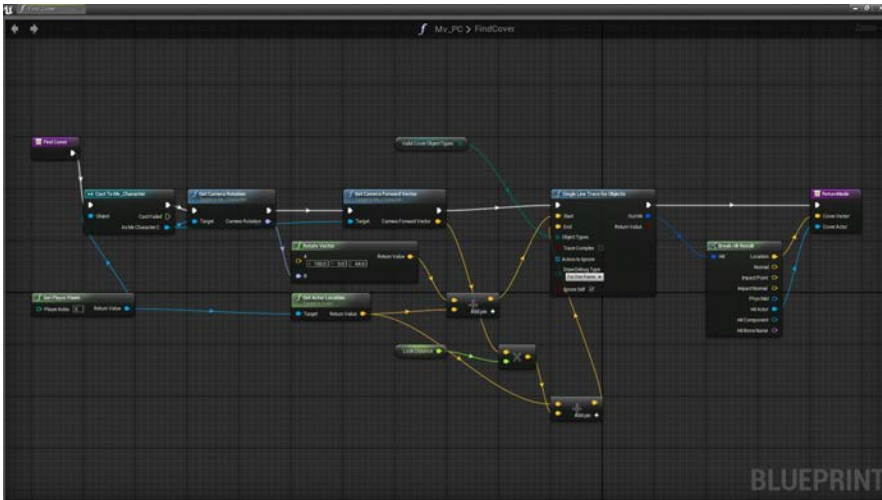Screenshots
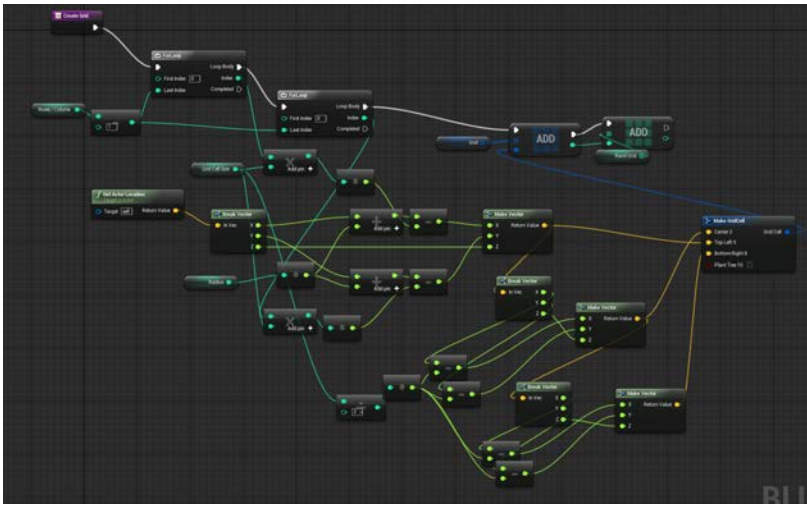
Node based programming/scripting

Blueprints (Unreal engine)

"a complete gameplay scripting system based on the concept of using a node-based interface to create gameplay elements from within Unreal Editor"

Documentation: https://docs.unrealengine.com/latest/INT/Engine/Blueprints/

Screenshots
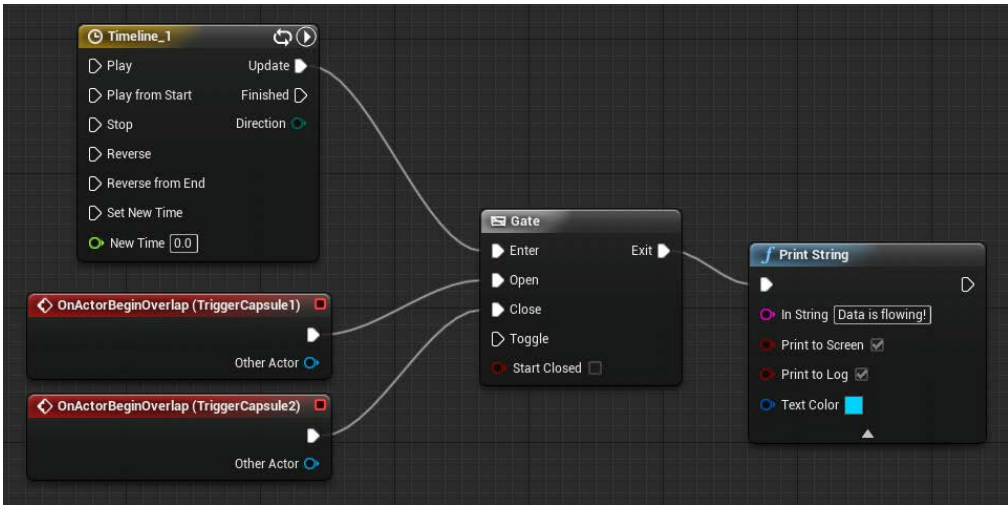
Specific documentation related to nodes (and how to interact with them): https://docs.unrealengine.com/latest/INT/Engine/Blueprints/UserGuide/Nodes/

Connecting nodes: https://docs.unrealengine.com/latest/INT/Engine/Blueprints/BP_HowTo/ConnectingNodes/

Placing nodes: https://docs.unrealengine.com/latest/INT/Engine/Blueprints/BP_HowTo/PlacingNodes/index.html

Flow control nodes: https://docs.unrealengine.com/latest/INT/Engine/Blueprints/UserGuide/FlowControl/index.html
Not that relevant (at the moment), but it has some interesting ideas of how to visualise the flow of data
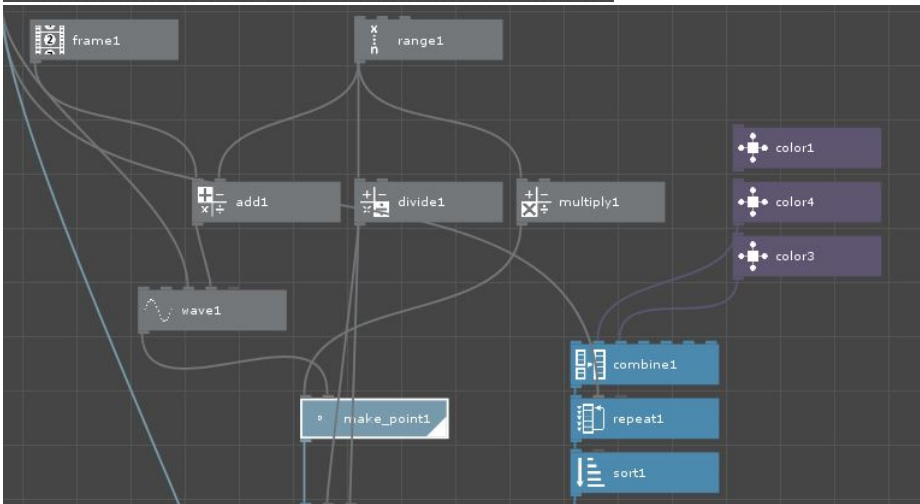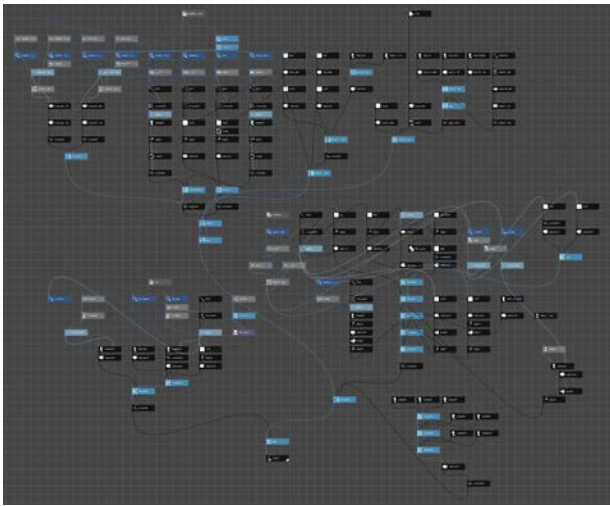
Collapsing nodes/node groups: https://docs.unrealengine.com/latest/INT/Engine/Blueprints/BP_HowTo/CollapsingGraphs/index.html
Not that relevant (at the moment) but might be handy in the future

UI documentation: https://docs.unrealengine.com/latest/INT/Engine/Rendering/Materials/Editor/Interface/index.html
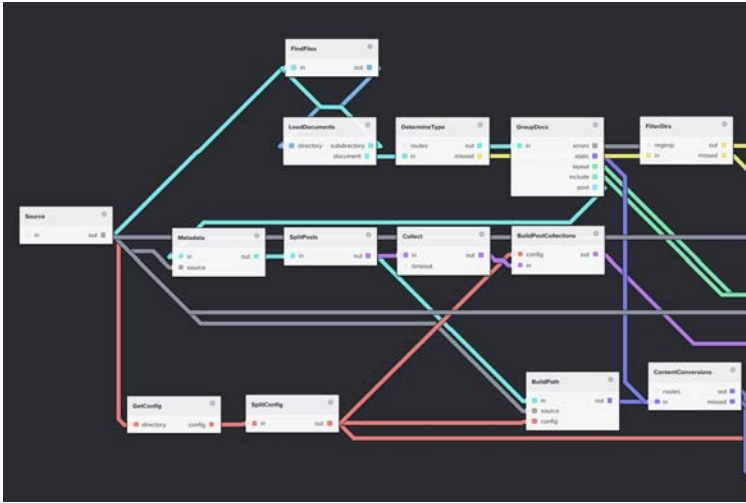Probably should have something similar on our documentation

NodeBox

https://www.nodebox.net/node/

NoFlo

https://noflojs.org/

Video editing/FX

PixelConduit

Apply effects, render them in real time

http://pixelconduit.com/

Other

List of data modelling tools: http://www.databaseanswers.org/modelling_tools.htm

DbDesigner: https://dbdesigner.net/ (one of the many)

Long list of visual programming languages: http://blog.interfacevision.com/design/design-visual-progarmming-languages-snapshots/
Screenshots here: https://nz.pinterest.com/source/blog.interfacevision.com/

More screenshots of node based interfaces:
https://nz.pinterest.com/aarrss/node/
https://nz.pinterest.com/eugenekiver/nodes/