

Seminar Algorithmentechnik – Ipe Tutorial



Ipe

What is Ipe

- drawing tool for vector graphics
- supports \LaTeX
- very customizable

What can I use it for?

- creating illustrations for papers, master theses, or seminar essays
- creating presentations (slightly more advanced)

Why should I use it?

- \LaTeX + WYSIWYG illustrations
- super fast (if you learn the keyboard shortcuts)
- very flexible due to its customizability

Most important tip: learn the shortcuts!

Basic Usage

Basic Tools

- paths: p, P, b
- curves: i, l
- circles: o, a
- marks: m
- labels: ℓ, \$, g
- select: s
- translate: t
- rotate: r
- scale: e
- edit: ctrl + e
- change width: alt + w

Object Properties

- filled shapes
- dash
- arrows

Navigation

- mouse wheel (pan + zoom)
- x, =, \

Z-Order

- ctrl + f
- ctrl + b
- ctrl + shift + b
- ctrl + shift + f

Snapping

Document properties

- ctrl + shift + p

Mouse shortcuts

- ctrl [+ shift] + lclick: select
- ctrl [+ shift] + rclick: scale
- alt + lclick: translate
- alt + rclick: rotate

Layers, Views, Pages

Layers

- every object lives on one layer
- layers can be hidden/shown independently
- new layer: ctrl + shift + n
- move to active layer: ctrl + shift + m

Views

- subsets of layers
- each view results in a separate pdf page
- new layer, new view: ctrl + shift + i
- navigating through views: PgUp, PgDown, Pos1, End

Pages

- independent pages with their own set of layers and views
- new page: ctrl + i
- copy, paste, cut page: ctrl + shift + c/v/x
- navigating pages: Shift + PgUp / Pg-Down

Customization: Style Sheets & Ipelets

Style sheets

- xml-file describing document features
- available colors, line thickness, arrow shapes, page size, etc.
- ctrl + shift + s

Ipelets

- lua-code for additional functionality
- folder: .ipe/ipelets (see Help → Show configuration)
- settings can be changed via this interface

Useful Ipelets

- goodies
- align & distribute
- move
- page numbers

Put into `~/.ipe/ipelets/custom.lua`

```
function IpeletByName(name)
    for _, ipelet in pairs(_G.ipelets) do
        if ipelet.name == name then
            return(ipelet)
        end
    end
end

IpeletByName("align").skip = 8.0
-- shortcuts to align top to bottom and set
skip
shortcuts.ipelet_14_align = "Alt+Shift+T"
shortcuts.ipelet_19_align = "Alt+Shift+S"
```

See also: <https://github.com/thobl/ipelets>

- hide
- offset
- decorator

Advanced Usage

Groups

- group and ungroup: ctrl + G, ctrl + U
- be careful: objects are placed on active layer

Combining paths

- compose $((A \cup B) \setminus (A \cap B))$, join
- clipping $(A \cap B)$: select group + object, “Add clipping path” (right click)

Transparency

Edit as xml

Presentation template

Title

- ctrl + p

Vorschläge zum Üben

