Presentations with Ipe

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Image source: Lecture “Computational Geometry”, WS21, JMU
What is Ipe?

When they expect an editor

And you hit them with that Brazilian wood
What is Ipe not?
What is Ipe not?

- a type of decking wood
What is Ipe not?

- a type of decking wood

- Investment & Pensions Europe
What is Ipe not?

• a type of decking wood

• Investment & Pensions Europe

• an art of coaching
The Ipe Editor

- “…extensible (...) vector graphics editor …” ~Wikipedia
- \LaTeX{} integration
- “ipelet” plugins written in C++ or Lua
- a ton of customisation

Download: https://ipe.otfried.org/
The Ipe Editor

- “...extensible (...) vector graphics editor ...” ~Wikipedia
- \LaTeX integration
- “ipelet” plugins written in C++ or Lua
- a ton of customisation
- a definitely very good & intuitive user interface

Download: https://ipe.otfried.org/
Opening Ipe for the first time...

Jarvis, what am I looking at?
Opening Ipe for the first time...

- Snapping modes

Jarvis, what am I looking at?
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- Drawing modes
- Snapping modes

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- Drawing modes
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- Properties

Jarvis, what am I looking at?
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- Drawing modes
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- Properties
- Views, pages & layers

Jarvis, what am I looking at?
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- Drawing modes
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- Properties
- More weird stuff...
- Views, pages & layers

Jarvis, what am I looking at?
Opening Ipe for the first time...

- Drawing modes
- Snapping modes
- Properties
- Views, pages & layers
- More weird stuff...

...and all of those *again*, plus some others, in the menu above.
Drawing Modes

Object manipulation

- selection [default]
- translation
- rotation
- etc.

small box

not so small box

Pizza
Drawing Modes

Object creation

- rectangles & other polygons
- circles & arcs
- splinegons

- lines & splines

- marks
Drawing Modes

Object creation

- rectangles & other polygons
- circles & arcs
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- marks
Drawing Modes

Text (feat. \textit{\LaTeX})

- labels

- larger paragraphs
- Lorem ipsum dolor sit amet, consectetur adipiscing elit

- math. formulas
  \[ \frac{1}{0} \]
Snapping Modes

- can use one or multiple at a time
- or disable them altogether
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- or disable them altogether
Properties

- fill and outline ("stroke") color
Properties

• fill and outline ("stroke") color

• line style, weight, arrow ends
Properties

- fill and outline ("stroke") color
- line style, weight, arrow ends
- figure style
Properties

- fill and outline ("stroke") color
- line style, weight, arrow ends
- figure style
- mark style & size
Pages, Views and Layers

Separate pages

• each page has a list of views
Pages, Views and Layers

Separate pages

• each page has a list of views

Each object can be assigned to a layer

• each view can include multiple layers
Pages, Views and Layers

Separate pages

• each page has a list of views

Each object can be assigned to a layer

• each view can include multiple layers
• layers can be renamed for convenience
Pages, Views and Layers

Pages → Edit title & sections

• allows editing of (sub)sections shown in PDF viewers
Hotkeys & Tricks

Hotkeys can immensely increase your efficiency using Ipe!

- S → Selection mode
- T → Translation mode
- G → Paragraphs
- M → Marks
Hotkeys & Tricks

If in doubt, try Shift!

• (de)select single objects
• create squares instead of random polygons
• resize instead of stretch
Hotkeys & Tricks

Two “hidden” selection modes

• from left to right: select objects **completely in** your bounding box
• from right to left: select objects **intersected by** your bounding box

\LaTeX{} auto-compilation is annoying? Disable it!

• instead, compile manually (Ctrl+L)

Pick and apply properties from one object to another
Save & Read Anywhere

Ipe documents can be saved in two ways…

• PDF
• XML (.xml or .ipe)
  • allows for use of versioning tools (e.g. Git)
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  - copying Ipe elements also puts them in the clipboard as XML
    - → copy entire pages!
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  - → copy entire pages!

Any Ipe PDFs are automatically recognised and can be edited again!
Style Sheets

- … are a great way of customising your slides

- and there is hardly any info on how to create one!
Style Sheets

- Edit → Style sheets
- a stack of .isy documents
- provide custom elements and styling
- copied on import & must not be shipped
- can be removed/updated
Style Sheets

Also responsible for

• paper dimensions
• title style & position
• slide background
• $\LaTeX$ preamble

also the $\LaTeX$ engine to use, document title, author etc. . . .

can also be defined in "Edit → Document properties"
Ipelets

- custom scripts in Lua/C++
- nice additional functionalities!
Discussion

OLD COOTS GIVING ADVICE
It's probably bad advice, but it's free.