Presentations with Ipe

Vasil Alistarov

27. November 2022
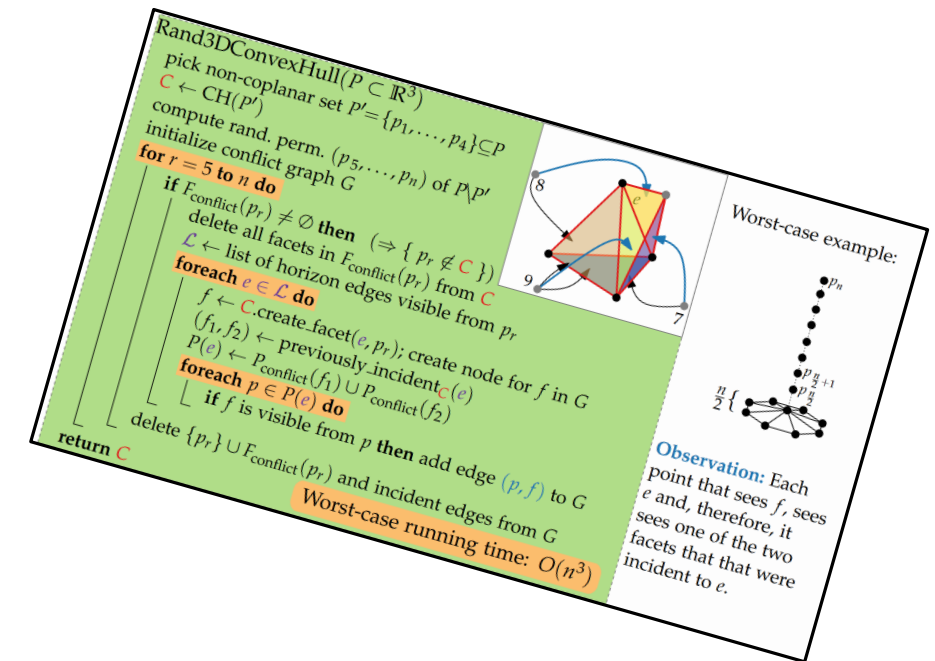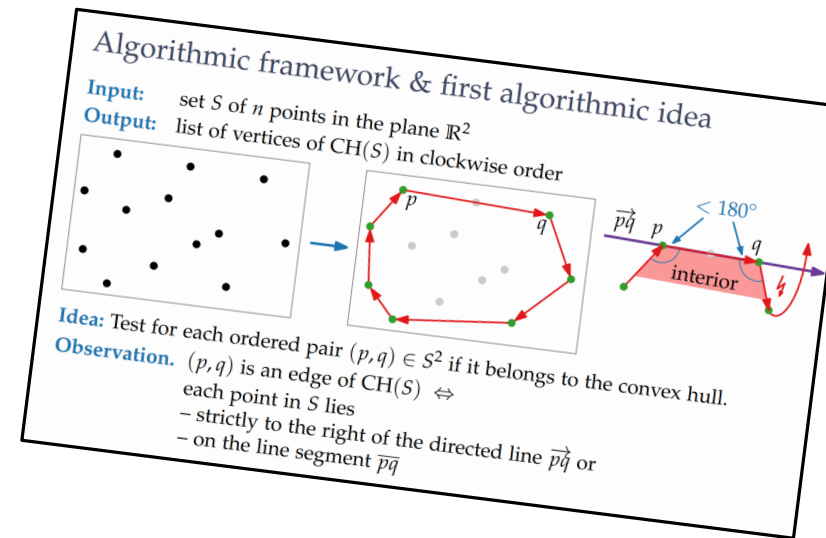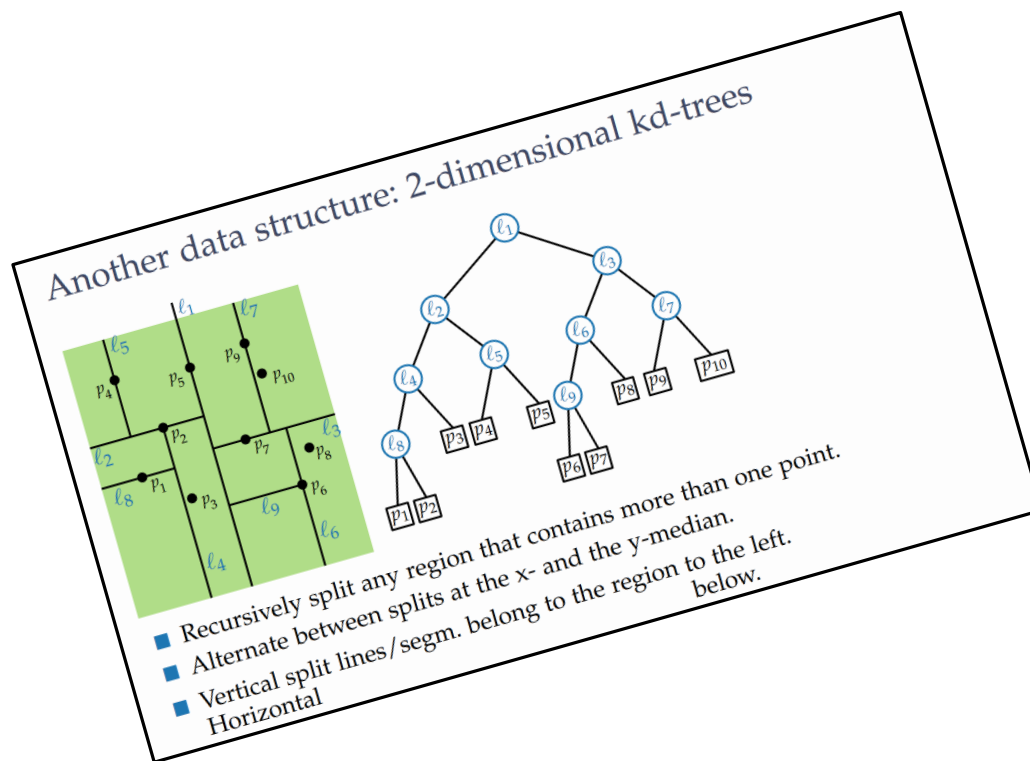
Image source: Lecture "Computational Geometry", WS21, JMU
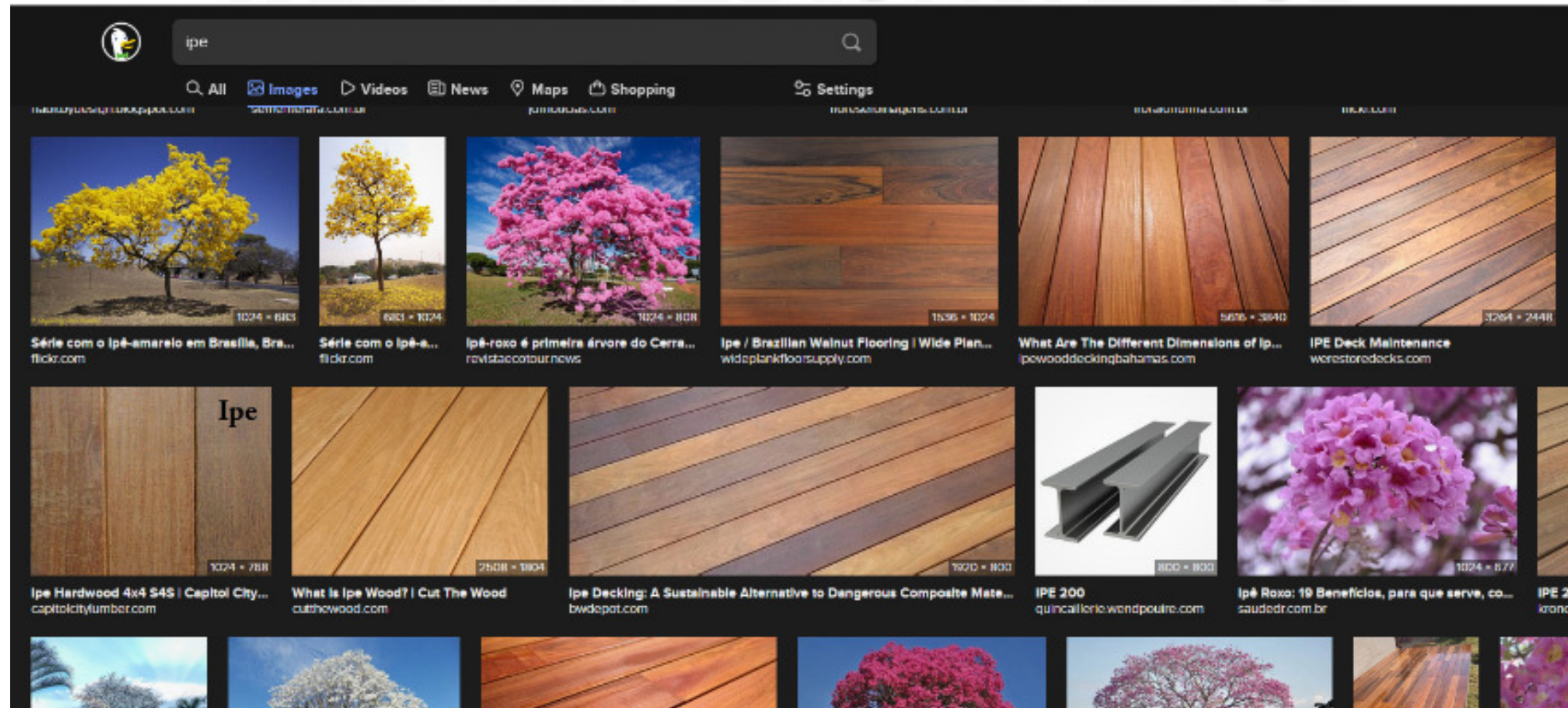
What is Ipe   ?

What is Ipe not?

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- a type of decking wood

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- a type of decking wood

- Investment & Pensions Europe
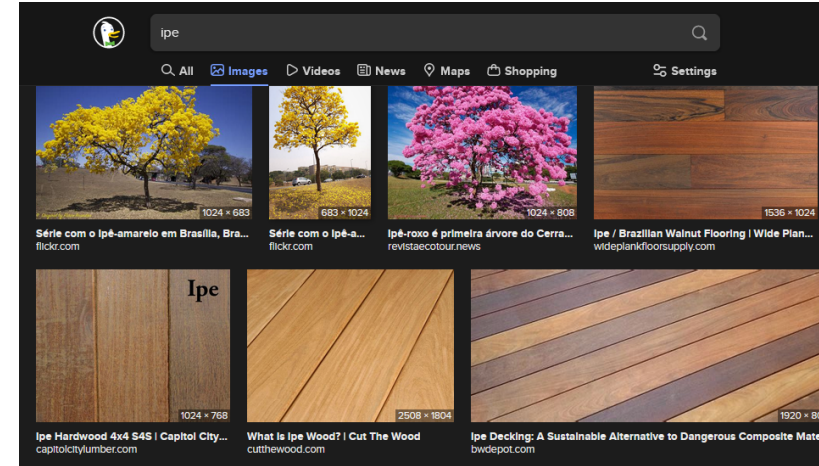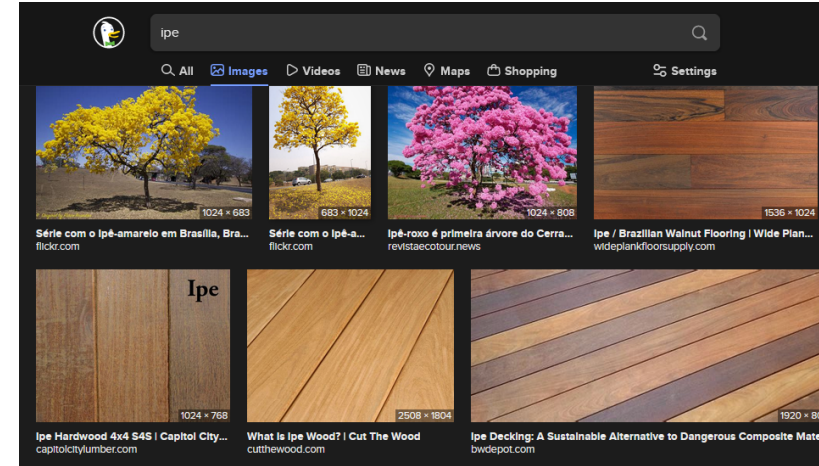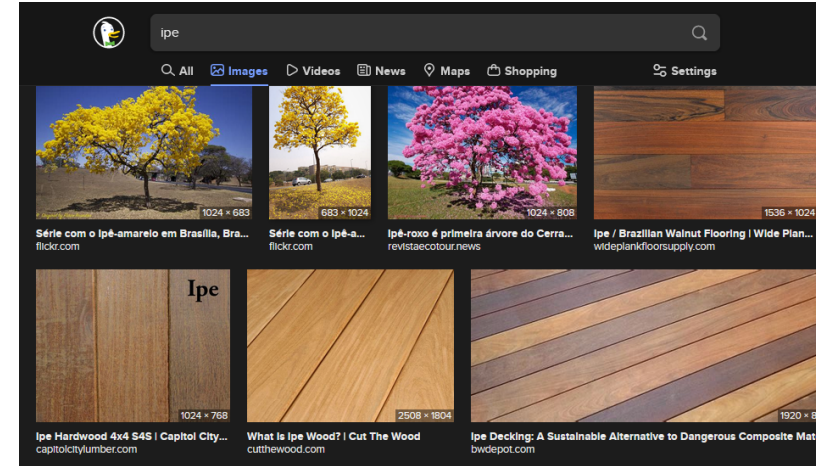
What is Ipe not?

- 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 & intutitve user interface

Download: https://ipe.otfried.org/

Opening Ipe for the first time...

Opening Ipe for the first time...

- Snapping modes

Jarvis, what am I looking at?

Opening Ipe for the first time...

- Drawing modes
- Snapping modes

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Opening Ipe for the first time...

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- Properties

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- Views, pages & layers

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- More weird stuff . . .

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Opening Ipe for the first time...

- Drawing modes

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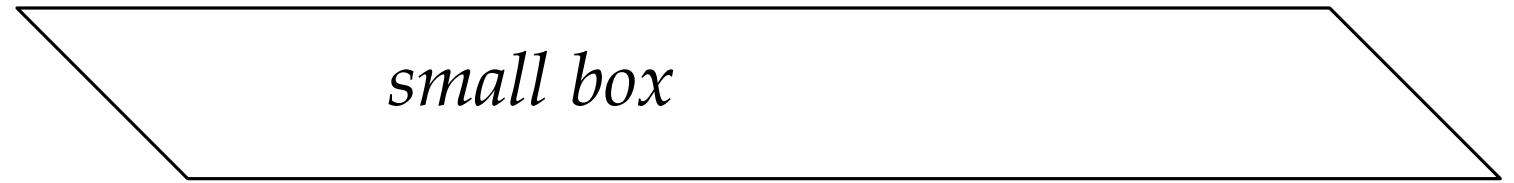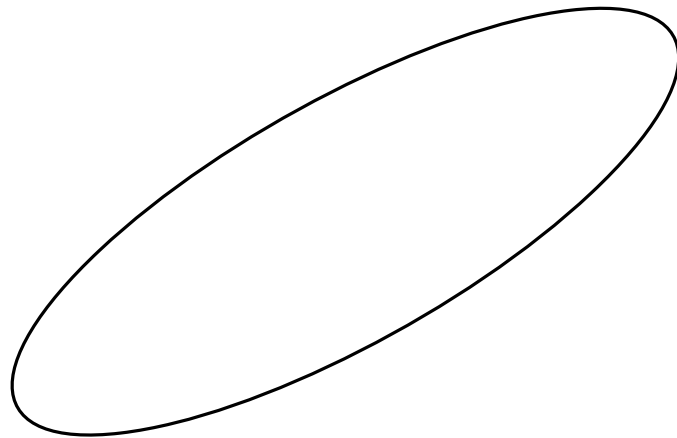- Properties

- More weird stuff ...

- Views, pages & layers

Jarvis, what am I looking at?

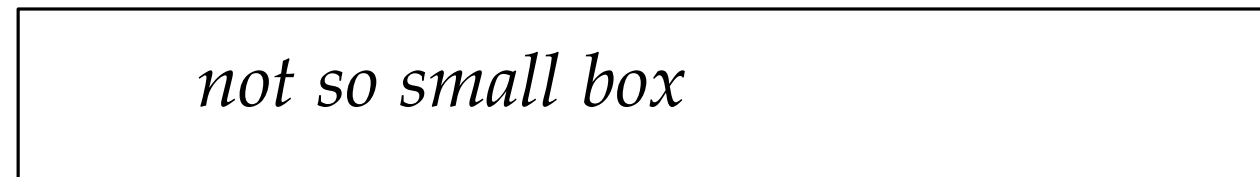...and all of those *again*, plus some others, in the menu above.

Drawing Modes

Object manipulation

- selection [default]

- translation

- rotation

- etc.

small box

pizza

not so small box

Drawing Modes

Object creation

- rectangles & other polygons

- circles & arcs
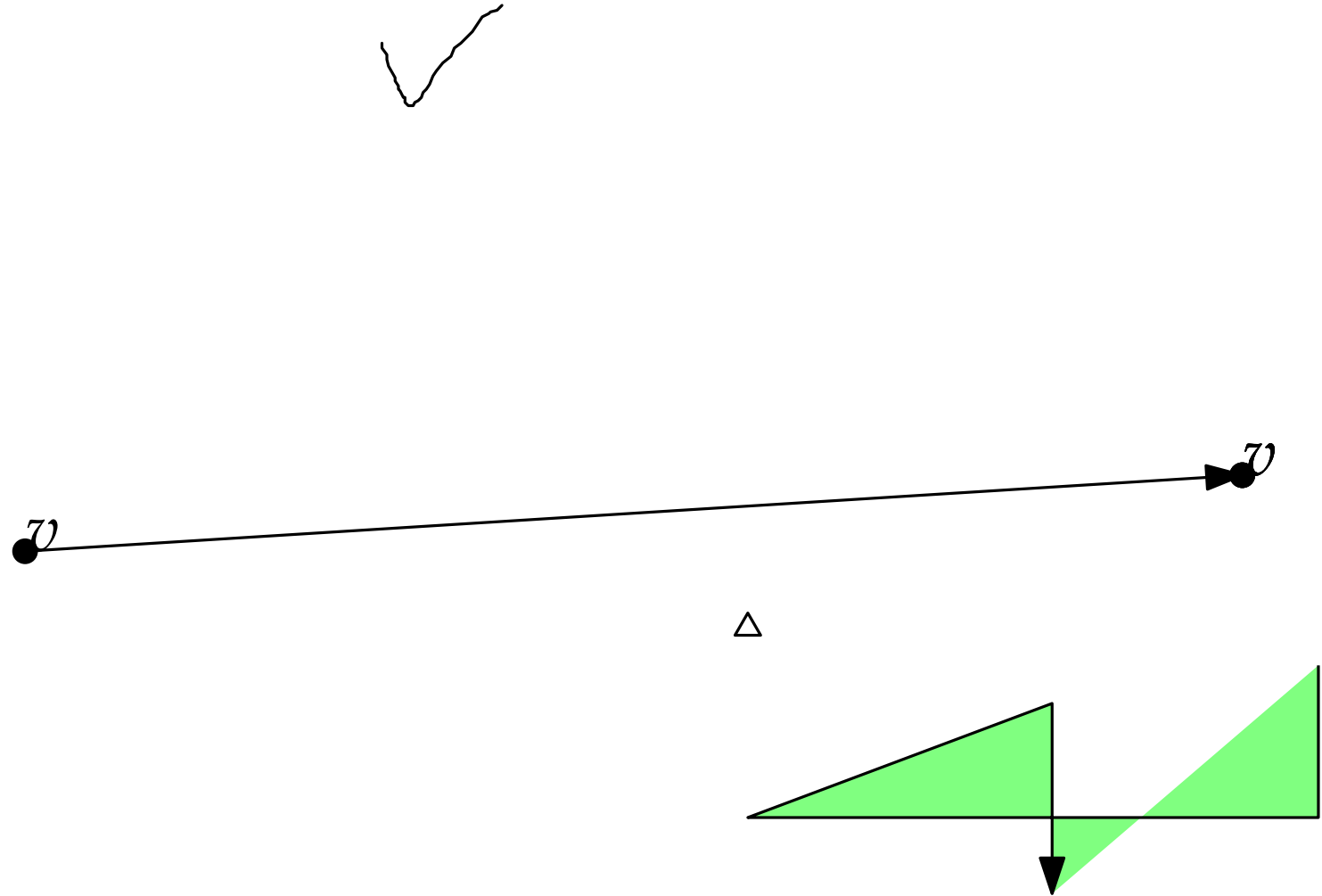
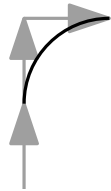- splinegons

- lines & splines

- marks

Drawing Modes

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Drawing Modes
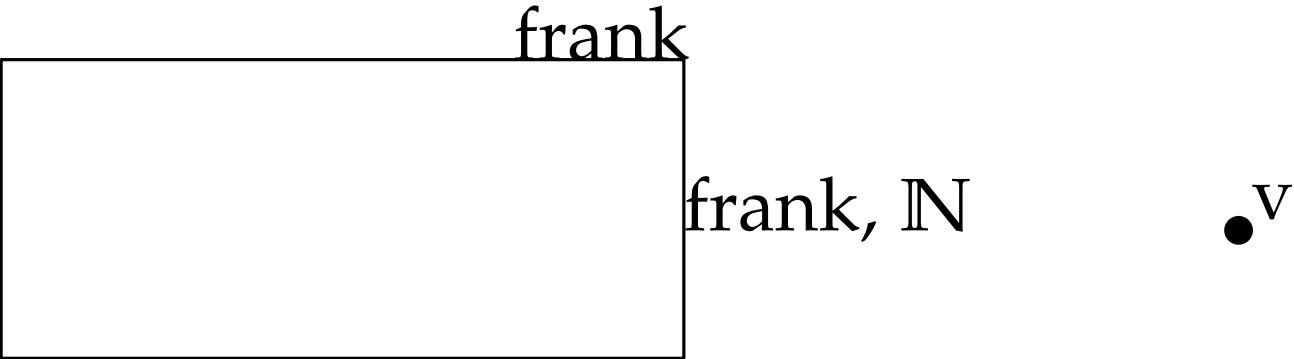
Text (feat. LaTeX)

- labels

- larger paragraphs

- math. formulas

frank

frank, $\mathbb{N}$

$\bullet^v$

- Lorem ipsum dolor sit amet, consectetur adipiscing elit

$\frac{1}{0}$.

Snapping Modes

- can use one or multiple at a time

- or disable them alltogether

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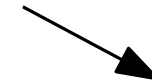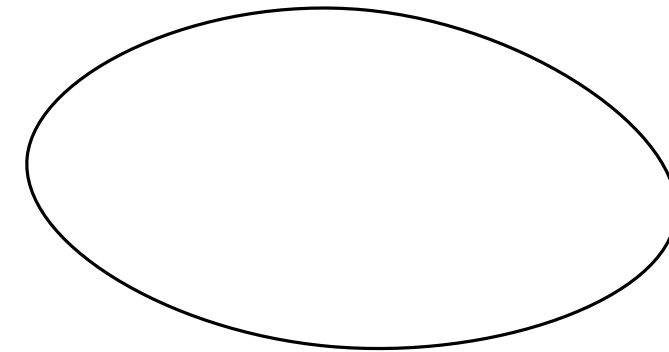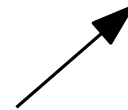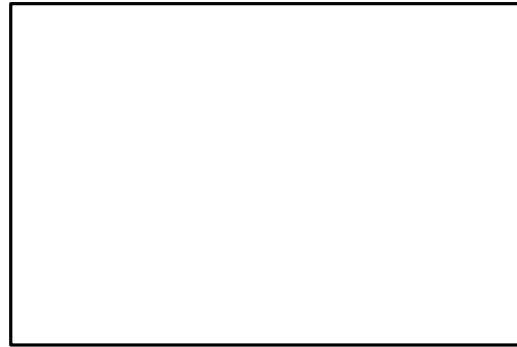
Snapping Modes

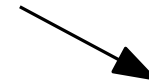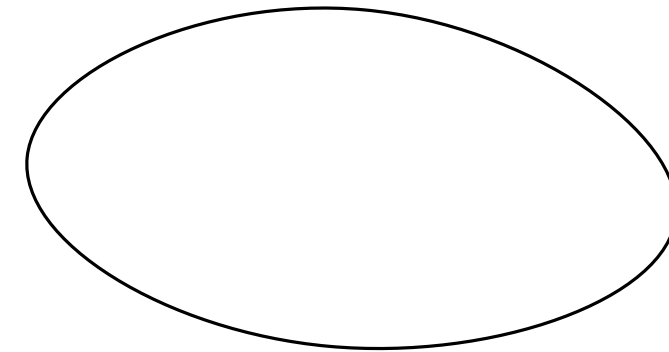- can use one or multiple at a time

- or disable them alltogether
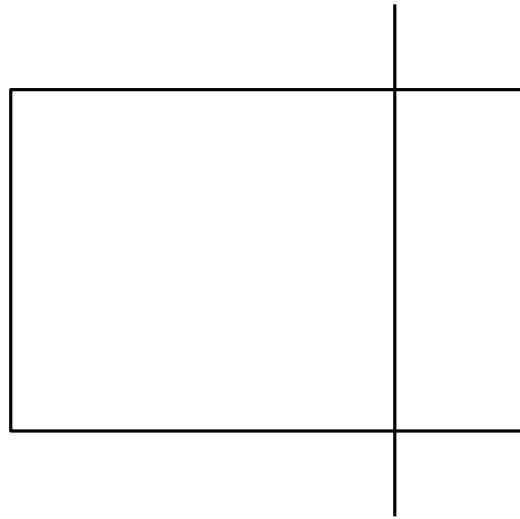
Snapping Modes

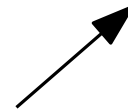- can use one or multiple at a time

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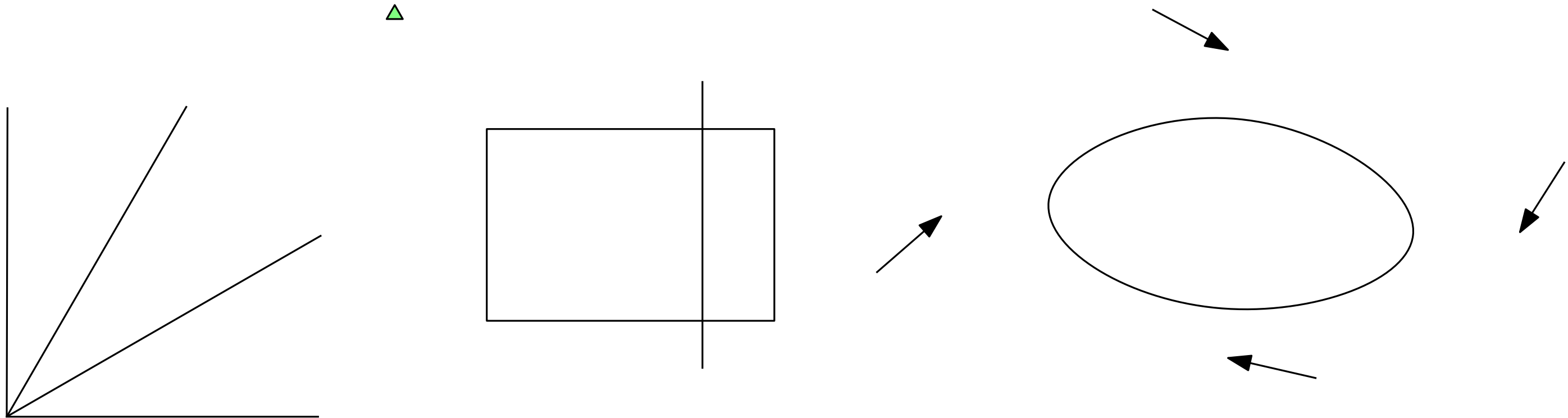
Properties

- fill and outline ("stroke") color
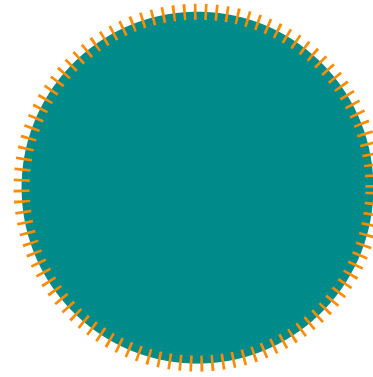
Properties

- fill and outline ("stroke") color

- line style, weight, arrow ends
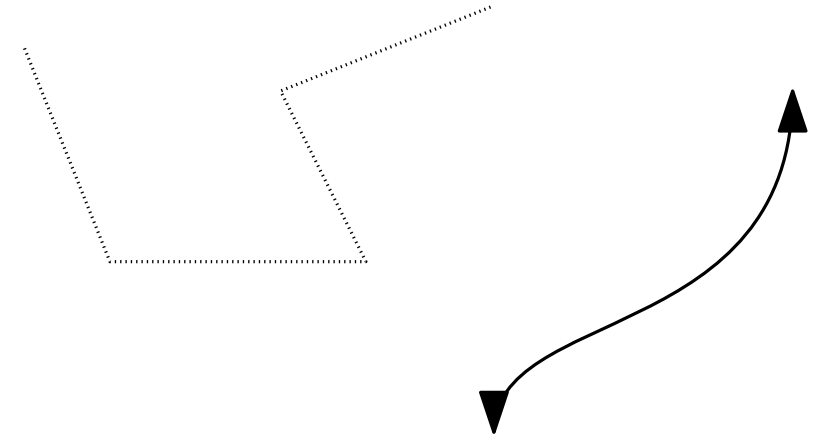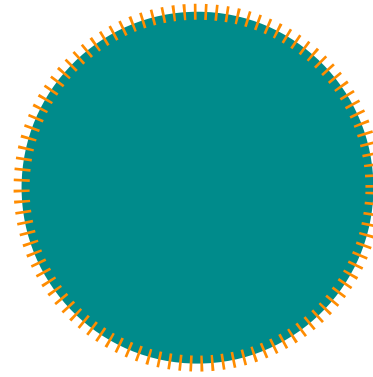
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- *figure style*

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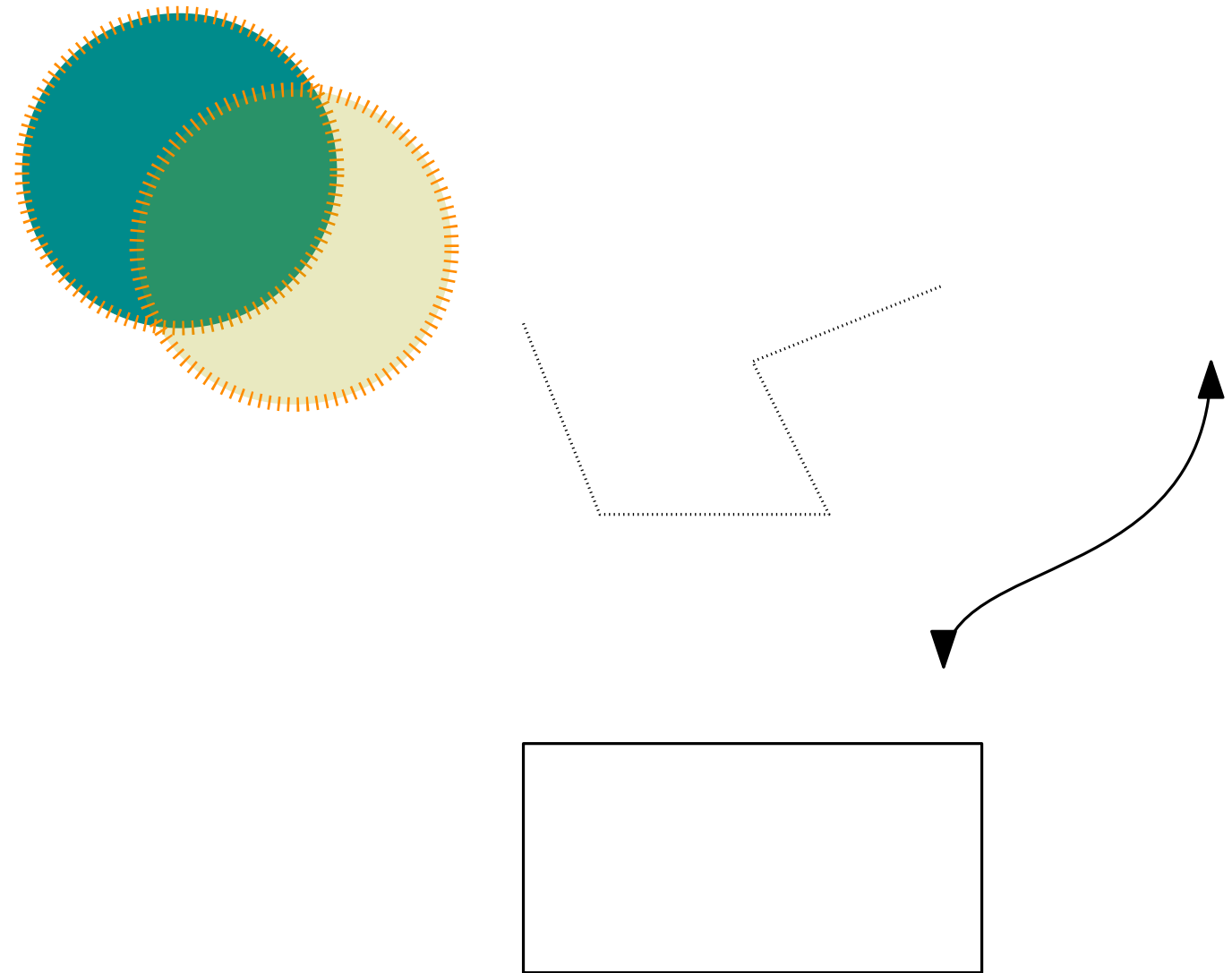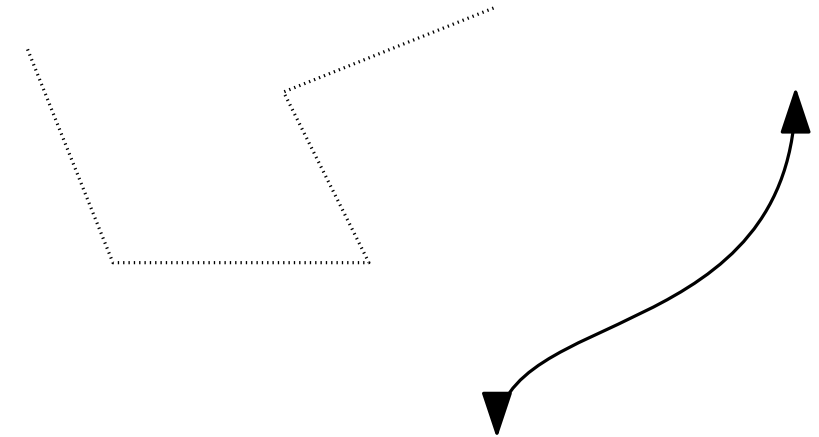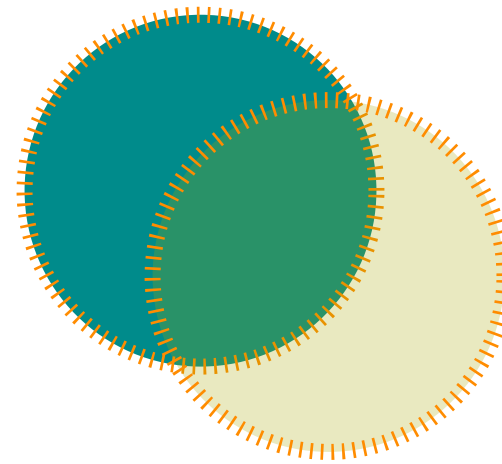
- mark style & size
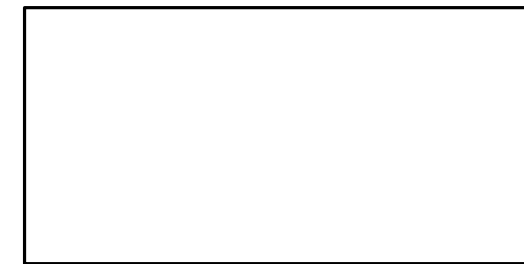
Pages, Views and Layers

Separate pages

- each page has a list of views

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Each object can be assigned to a layer

- each view can include multiple layers

Text object	
Layer: beta	>
Pinned: none	>
Transformations: translations	>
Type: minipage	>
Color: (0,0,0)	>
Size: small	>
Style: item	>
Horizontal alignment: left	>
Vertical alignment: top	>
Opacity: opaque	>
Change width	
Pick properties	
Apply properties	
Edit as XML	
Edit text	

alpha
✓ beta
gamma

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

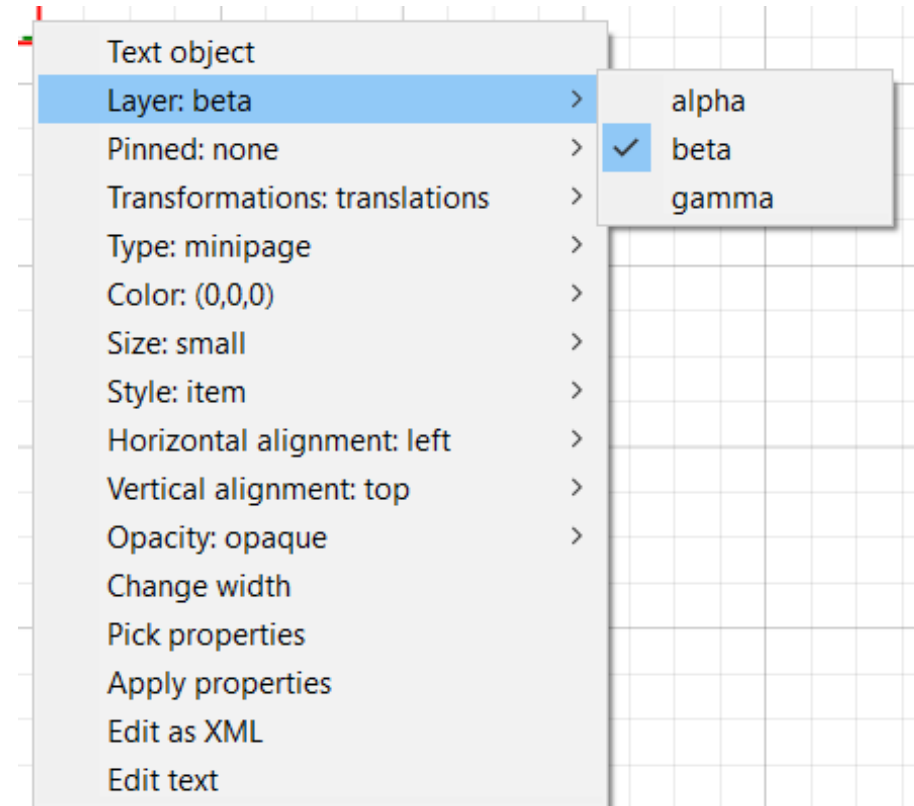| Text object		
Layer: beta	>	alpha
Pinned: none	>	✓ beta
Transformations: translations	>	gamma
Type: minipage	>	
Color: (0,0,0)	>	
Size: small	>	
Style: item	>	
Horizontal alignment: left	>	
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Opacity: opaque	>	
Change width		
Pick properties		
Apply properties		
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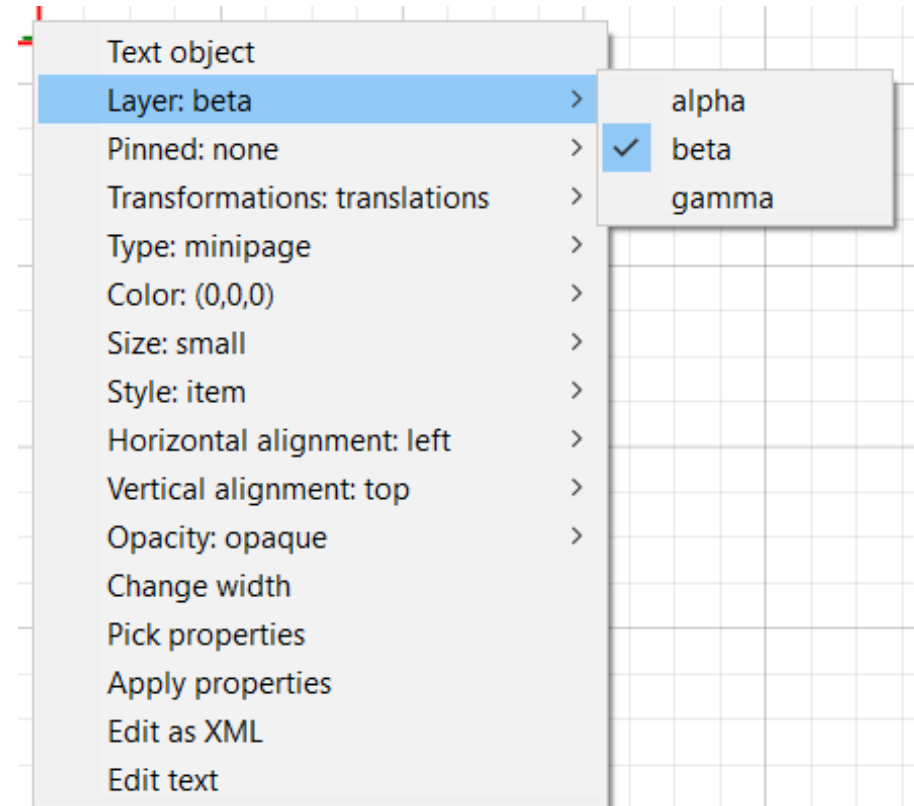
Pages, Views and Layers

Pages → Edit title & sections

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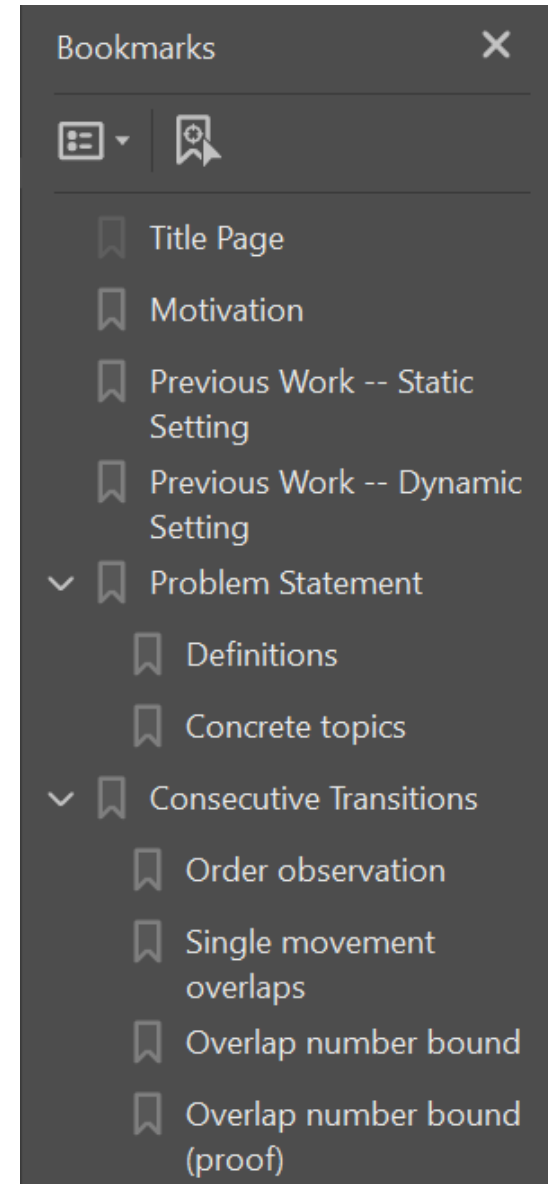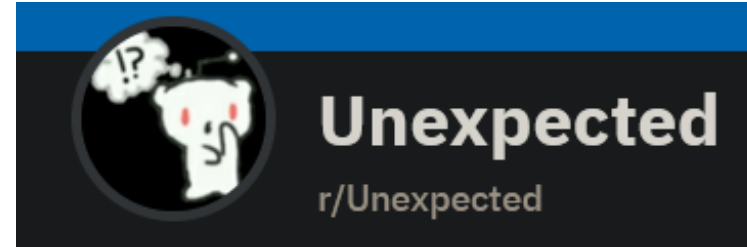
Hotkeys & Tricks

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

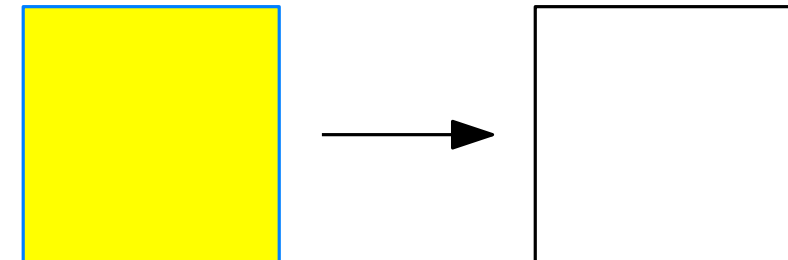- from left to right: select objects **completely in** your bounding box

- from right to left: select objects **intersected by** your bounding box

LaTeX auto-compilation is annoying? Disable it!

pizza

$\downarrow$

pasta

- 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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        - → copy entire pages!

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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!

When your custom character appears in a cutscene

Style Sheets

- Edit → Style sheets

- a *stack* of .isy documents

- provide custom elements and styling

- copied on import & must not be shipped
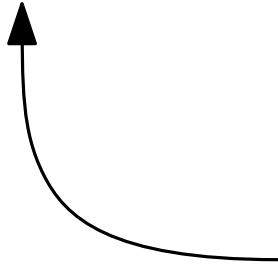
- can be removed/updated
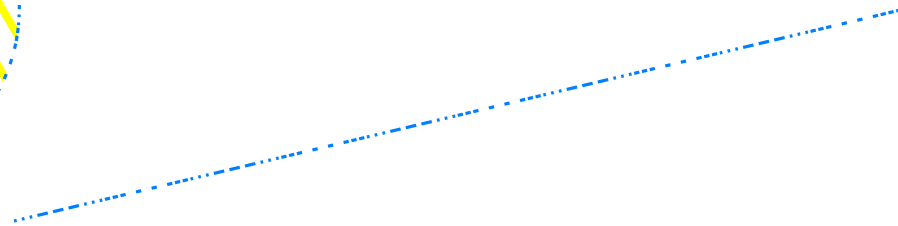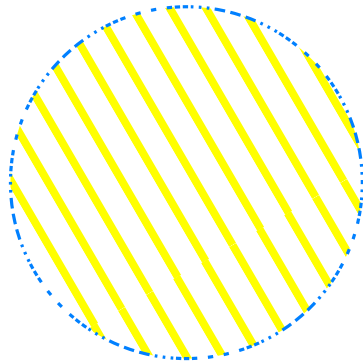
Style Sheets

Also responsible for

- paper dimensions

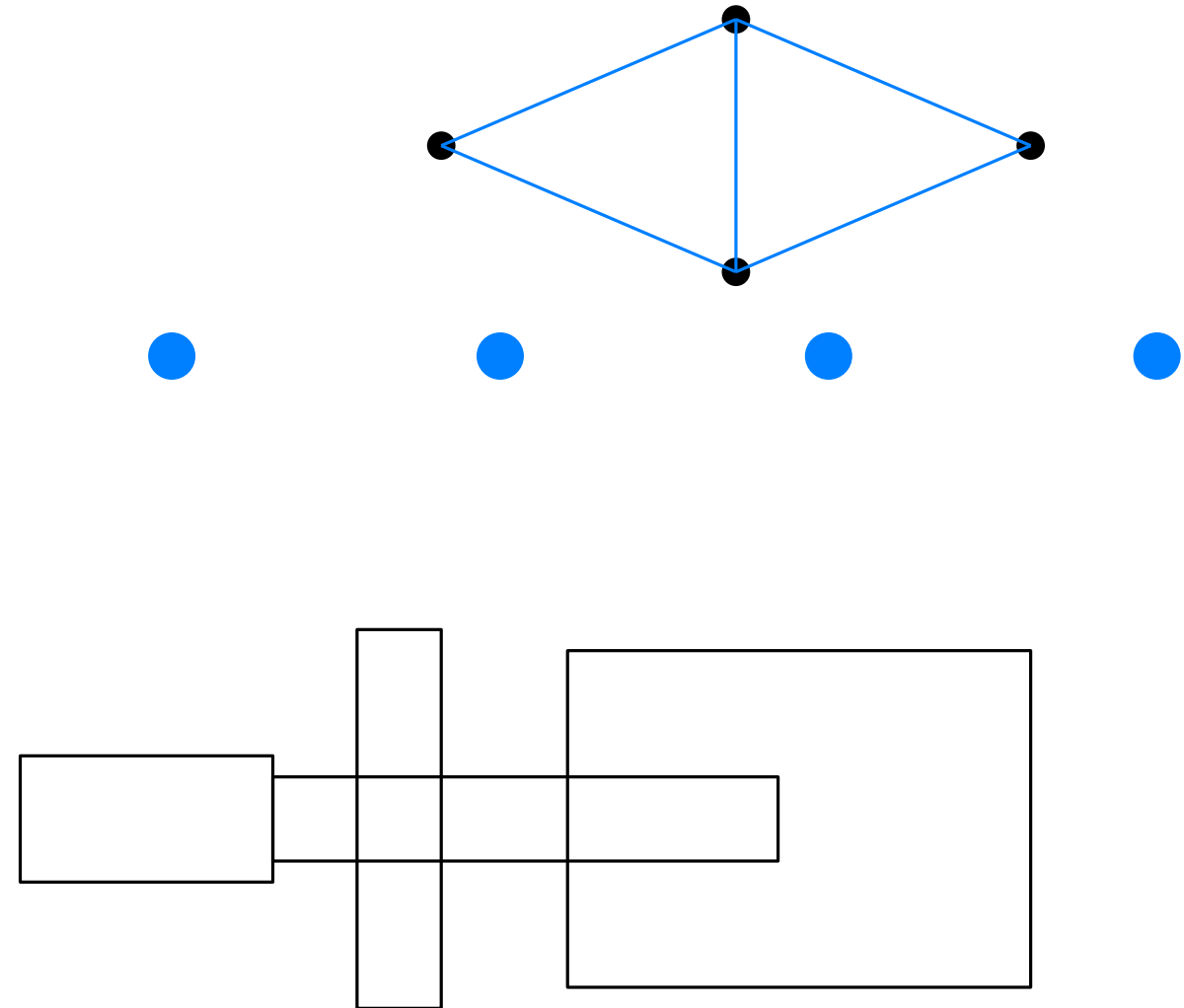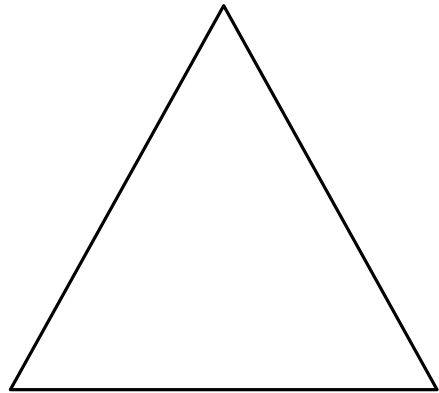- title style & position

- 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