Presentation Best Practices

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Big Picture: Win - Win

- In any case you are likely spending hours to prepare & deliver your presentation
- Audience wants to get something out of your presentation

- Often just a few tweaks needed to …
  - Make it easier for audience to get something out of your presentation
  - Give you good feeling that your presentation helped audience understand something they did not know as well before
  - Get you better grade

Goal: Make It Easy to Understand and Interact With Presentation Topic

- Trap: This does not mean to "dumb down" presentation
  - You should still achieve the same learning outcomes
- On contrary: Once material is easy to understand it enables audience to achieve **more** learning outcomes in same amount of time

- Audience no longer needs to spend (waste) time
  - Locating piece of information in dozen-plus page slide set
  - Trying to decipher hard-to-read text / table / figure
  - Missing presenter's comments due to reading large text block

Based on Observing Student Presentations at UTA since 2008

- I have been teaching CSE 6324 + various other classes since Fall 2008
  - CSE 6324: S23 (Spring 2023), F22 (Fall 2022), F21, F20, F18, F17, S17, S15, S14
  - CSE 6329: S13, S11, F08
  - ...

- Each class had some form of student presentations

- Some student presentations were easy to follow

- Following best practices all based on student presentations I have seen in my classes

Structure Your Talk -- But Don't Talk About the Talk's Structure

- Attention is a scarce resource
- Audience gives max attention at start
  - Audience then spends a few minutes to decide if should keep paying attention

- Don't waste first few minutes!
  - Don't start with talking about table of contents about what you will be talking about
- Better: Start with
  - Demo of your tool implementation
  - Problem statement or key results

One Topic Per Slide

- Topic can be a collection of things, e.g.:
  - Overview of tool's architecture / workflow

- But avoid describing two elements of such a collection on same slide

- If a slide deals with two topics:
  - Break slide into two slides

Slide Title Should State Slide's Key Point

- Slide should summarize topic the slide deals with

- If you get lost during presentation:
  - Skimming title allows you to quickly remember slide contents

- When preparing for a quiz:
  - Skimming title lets you quickly decide if you need to study slide in detail

Each Slide Should Have a Slide Number

- Makes it easier for audience to ask follow-up questions.

- I have seen many students ask variations of the following questions right after a student presentation:
  - "On slide 3, what does XYZ mean?"
  - "Can you please go back to slide 3?"

Slide number should be readable during the presentation
- For each audience member in the room
- For each audience member online (even on a small screen)

Avoid using such a section header slide (essentially only contains a chapter title)

TEXT

Essentially a waste of presentation time
- Takes time to flip to / flip from
- Takes time to talk about
- Takes time to read

Project presentations are short / don't have time to waste

This slide set only uses such section header slides to make it easier to look up content offline, **after the presentation**

Avoid Placing Entire Paragraph on Slide

- Having an entire paragraph on a slide forces the audience to choose between reading the paragraph and listening to the presenter. Having to make this choice is a source of stress by itself. Some people may start listening to you and then start reading, taking a break to make sure they do not miss anything important you say and then try to find the spot in the slides where they left of reading. This often leads to missing both: The spoken word and the written word, leaving the audience frustrated. You do not want to frustrate your audience. Do not place an entire paragraph of text on your slide.

Better: Convert Text to Bullet Points

- Paragraph forces audience to choose: Listen vs read?
- Audience then often flip-flops between listen & read
  - Leads to missing some (or all) of content

- Both (forced choice & flip-flopping) stresses audience

- Also: Bullet points makes it easier to animate slide ☺

Work-around: Highlight & Read Out

- If you really need the paragraph on the slide:
  - Highlight key words / phrases
  - Slowly read out the parts of the text that are most important
  - Explain why these are the important parts

- Typically only needed for showing a quote

Use Sparingly, Typically Only for Quotes

- Having an entire paragraph on a slide forces the audience to **choose between reading** the paragraph **and listening** to the presenter. Having to make this choice is a source of stress by itself. Some people may start listening to you and then start reading, taking a break to make sure they do not miss anything important you say and then try to find the spot in the slides where they left of reading. **This often leads to missing both**: The spoken word and the written word, leaving the audience frustrated. You do not want to frustrate your audience. Do not place an entire paragraph of text on your slide.

Slide Text: Single **Sans-serif** Font

- Try to use a single font throughout your presentation
- **Sans-serif font makes slides easier to read**

- I would pick one of the following:
  - Neue Hass Grotesk Text: This is an example line of text
  - Helvetica: This is an example line of text in this font
  - Arial: This is an example line of text in this font
  - Calibri: This is an example line of text in this font

- But for code, I would pick a monospaced font, e.g.:
  - `Consolas`

Save Serif Fonts for Documents

- Serif font good in non-slide documents (for text paragraphs)
  - Serif: Letters have small "feet" (e.g., at bottom of "f")
  - Sans-serif: Letters do not have such "feet" (e.g.,: "f")

- **Serif font makes slides harder to read**
- This slide uses the same font size as previous one (here: 24)

- In slides I would thus avoid fonts such as the following:
  - Times New Roman: This is an example line of text in this font
  - Garamond: This is an example line of text in this font
  - Palatino Linotype: This is an example line of text in this font

Text Color: Aim for High Contrast

- High contrast = Easy to read
  - Dark color on white
  - Black on white

- Avoid low contrast
- Examples:
  - Light color on white
  - Light grey on white
  - Color on slightly different color

Text Effects: Avoid vs Use Selectively

- Text shadow: Avoid
  - Text shadow makes text harder to read

- ALL CAPS: USE SPARINGLY
  - ALL CAPS CAN BE USEFUL TO EMPHASIZE A TERM
  - BUT ALL CAPS MAKES TEXT HARDER TO READ

- **Bold: Use sparingly**
  - **Bold is great for highlighting words or short phrases**
  - **But making several lines (or an entire slide) all bold makes it harder to read the slide**

Text Size: Bigger is Better

- Some students may watch a presentation on their phone / other small screen

- Larger text is easier to read (24)
  - The smaller you go (20)
    - The harder (18)
      - This becomes (16)
        » To read (14)
          - Especially on (12)
            - Small (10)
              - Screens (8)

Code is Text

- Same text size considerations apply as last slide
- Rule of thumb: Code should be like slide's main text
  - Sans serif
  - Size
  - Color & contrast
  - No shadow, ...

- Otherwise audience will not bother trying to read any of your code

- Ok to break code into multiple slides

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TOOL DEMOS

Code in Your Editor During Demo is Text

- Same text size considerations apply as last slide

- Also: Avoid scrolling code during demo
  - Audience does not know the code like you do
  - Scrolling will confuse audience

Text in Tool's UI / Input / Output is Text

- During a live demo, you may be showing your tool's
  - Graphical / textual UI
  - Inputs / Outputs
- Some of that will be text

- Same text considerations apply as last slides
 - Including to limit scrolling

FIGURES & TABLES

Text in Figures / Tables is Text

- Same text size considerations apply as last slide

- Same rule of thumb: Text in figure / table should be like slide's main text
  - Sans serif
  - Size
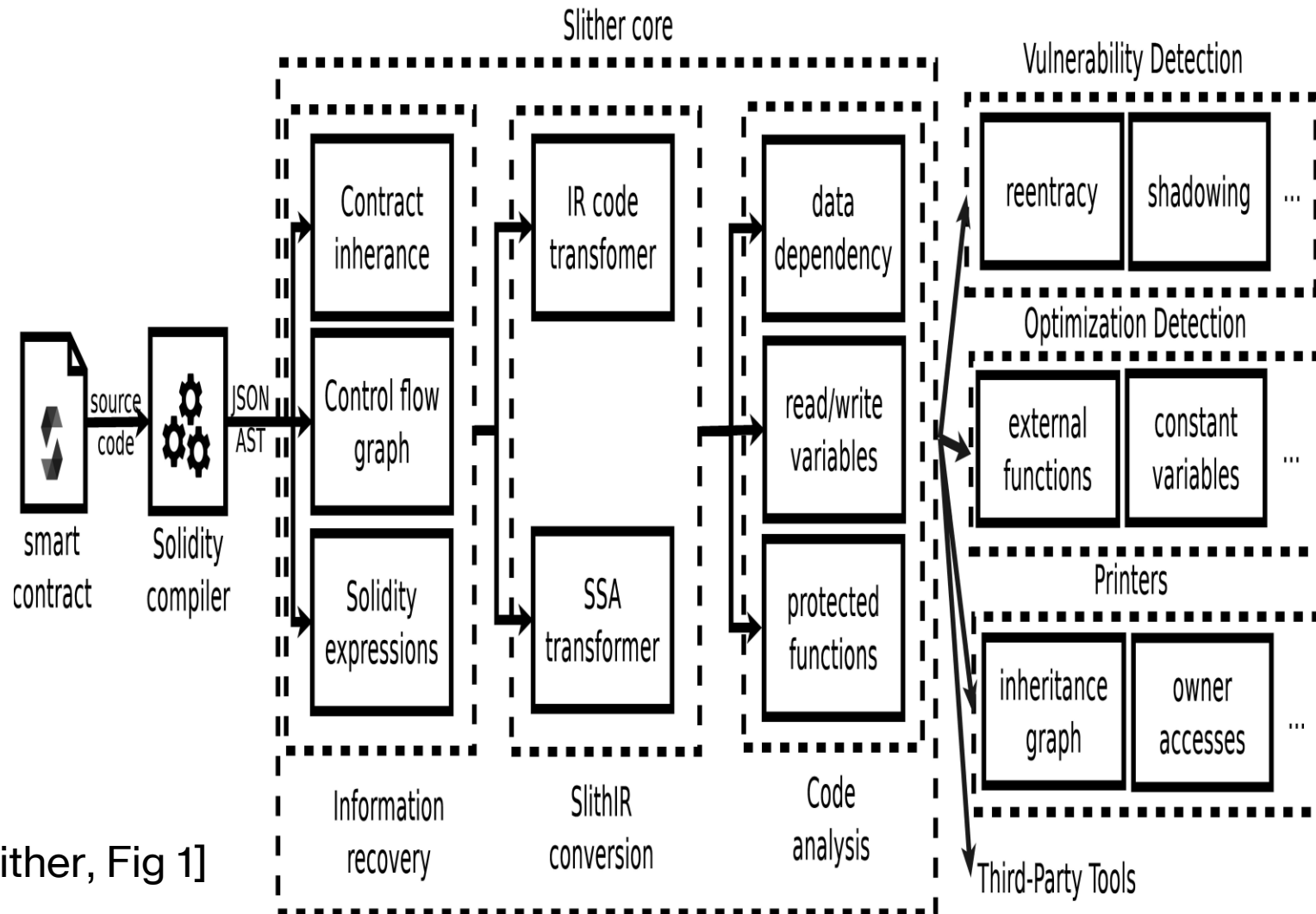 - Color & contrast
  - No shadow, ...

Maintain Natural Aspect Ratio

- Avoid "squishing" figure/table to "make it fit"
- Example: Which is easier to understand, this or next slide?
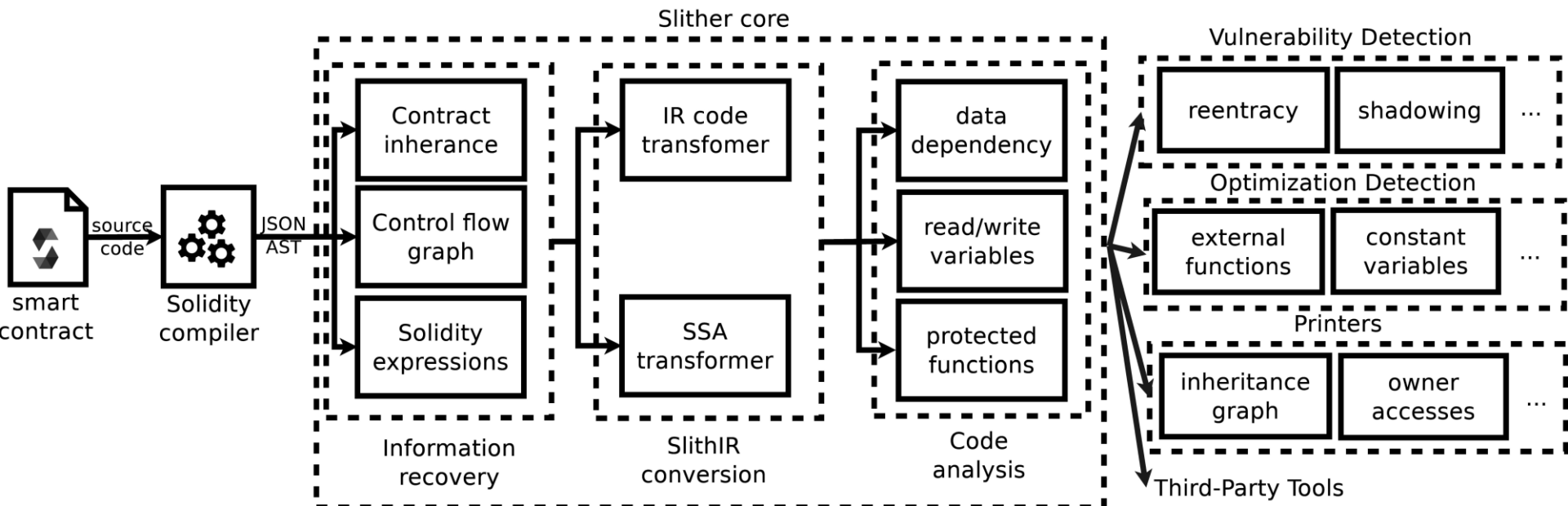
[Slither, Fig 1]

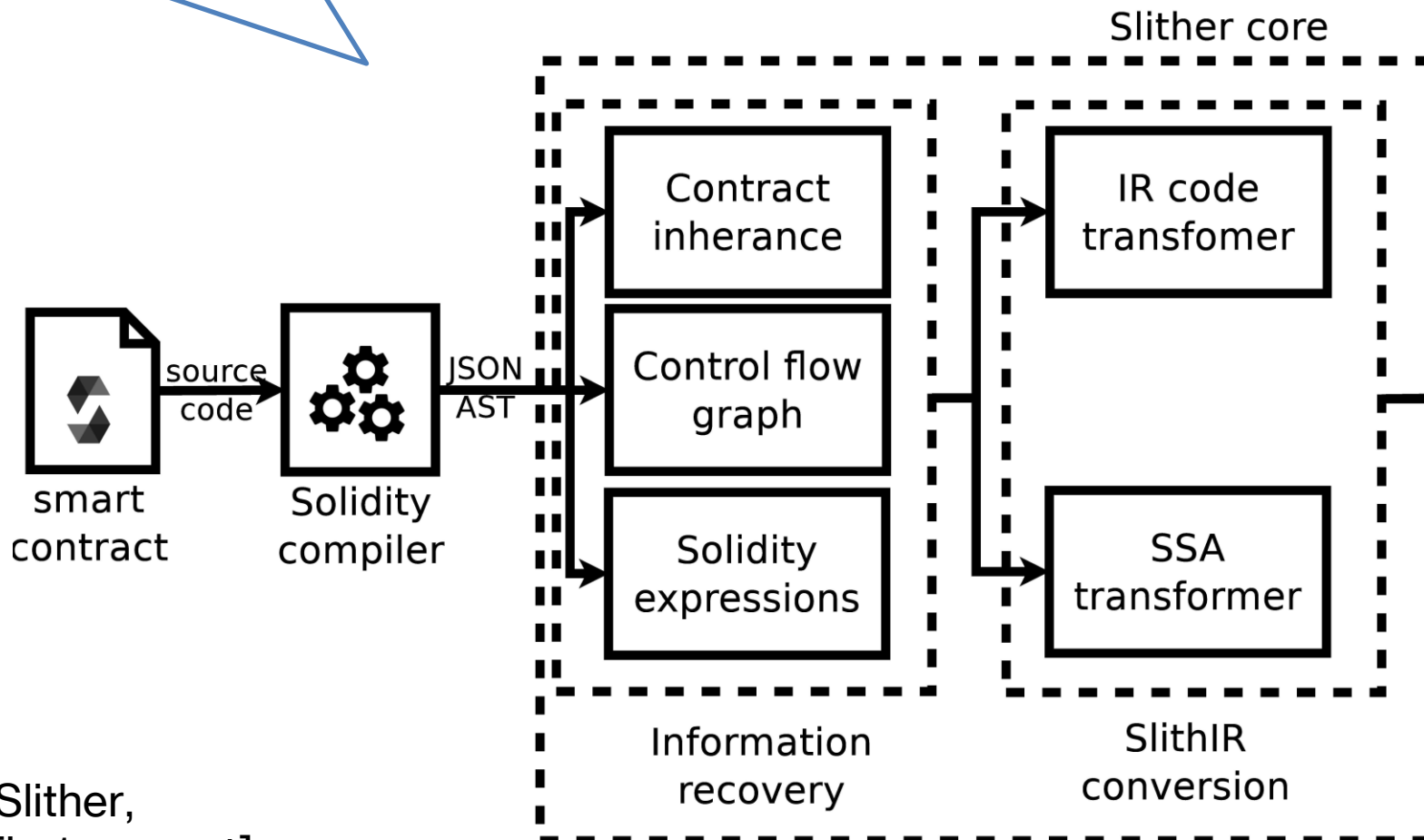# Example: Avoid Squishing Figure/Table
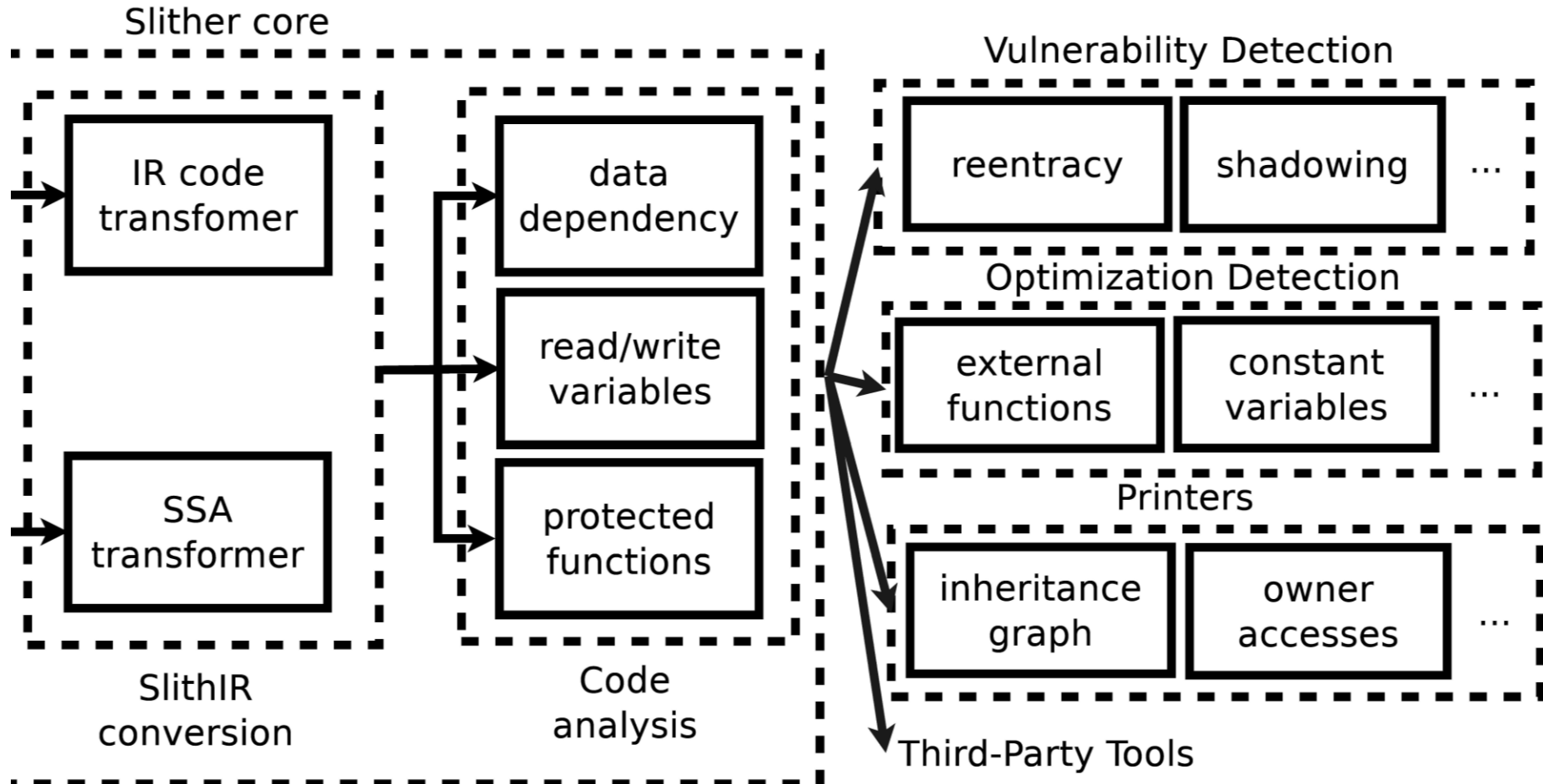

[Slither, Fig 1]

One Way to Show a Large Figure (1/2)

Crop and show piece by piece

[Slither,
Fig 1 excerpt]

One Way to Show a Large Figure (2/2)

[Slither, Fig 1 excerpt]

Aligning Numbers in a Column Can Make Them Easier to Compare

A	B	C	D
1234.5	1234.5	1234.5	1234.5
12.3	12.3	12.3	12.3
1.234567	1.234567	1.2	1.2
123.45	123.45	123.5	123.5

Which of these 4 columns is easiest to understand?

May require rounding numbers to appropriate precision

SHOULD YOU USE A TLA?

WAIT, WHAT WAS A TLA AGAIN?

First Use: Spelled Out + Abbreviation

- Avoid abbreviations
- Avoid acronyms
  - Especially obscure ones such as three-letter Acronym (TLA)

- When is it okay to use an abbreviation / acronym?
  - If **entire** audience knows what it means (USA, UTA, WWW, ..)
  - Else: **After** the spelled-out version appears in your slides

- Example styles
  - Three-letter acronym (TLA)
  - TLA := Three-letter acronym

References

- [Slither] "Slither: A static analysis framework for smart contracts"
  - By Josselin Feist, Gustavo Grieco, Alex Groce. Aug. 2019
  - In Proc. IEEE/ACM 2nd International Workshop on Emerging Trends in Software Engineering for Blockchain (WETSEB)
  - https://arxiv.org/abs/1908.09878