

(An Opinionated Talk)
On Preparing ~~Good~~ Talks

Ranjit Jhala



UC San Diego

Ranjit Jhala

Advising students since 2005 (!)

Ranjit Jhala

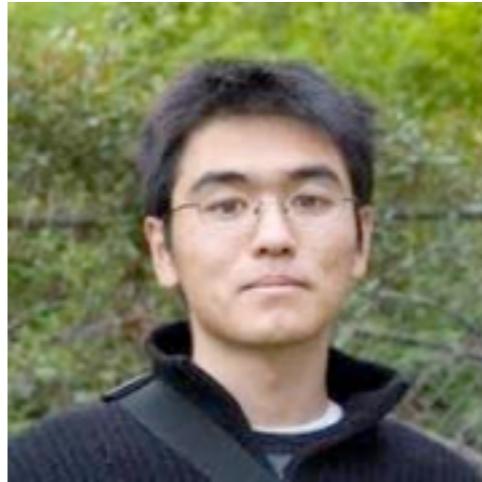
Advising students since 2005 (!)



P. Vekris



P. Rondon



M. Kawaguchi



A. Bakst



J. Young



R. Chugh



N. Vazou



E. Seidel

Ranjit Jhala

Advising students since 2005 (!)

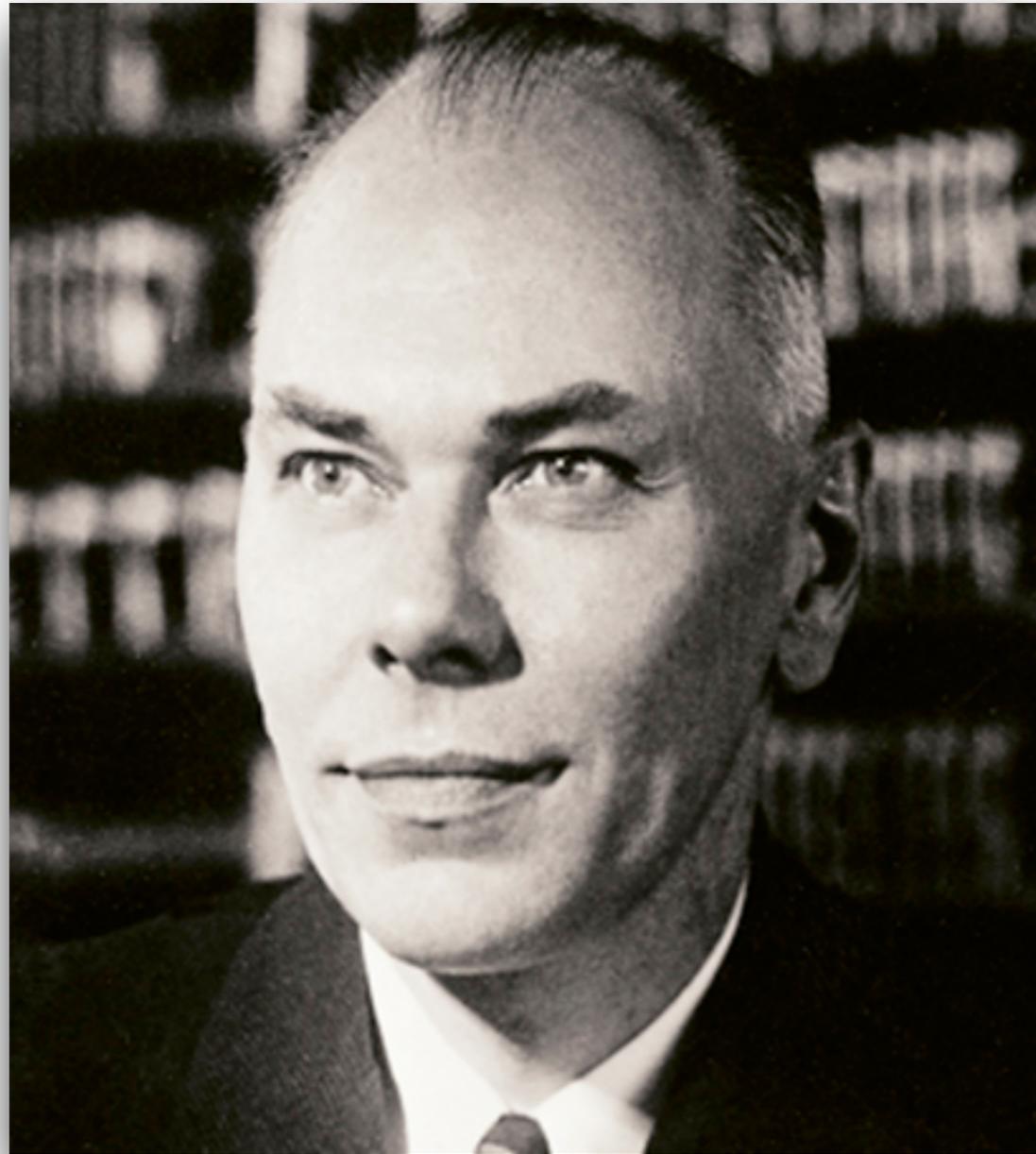


Ranjit Jhala

I obsess about giving good talks

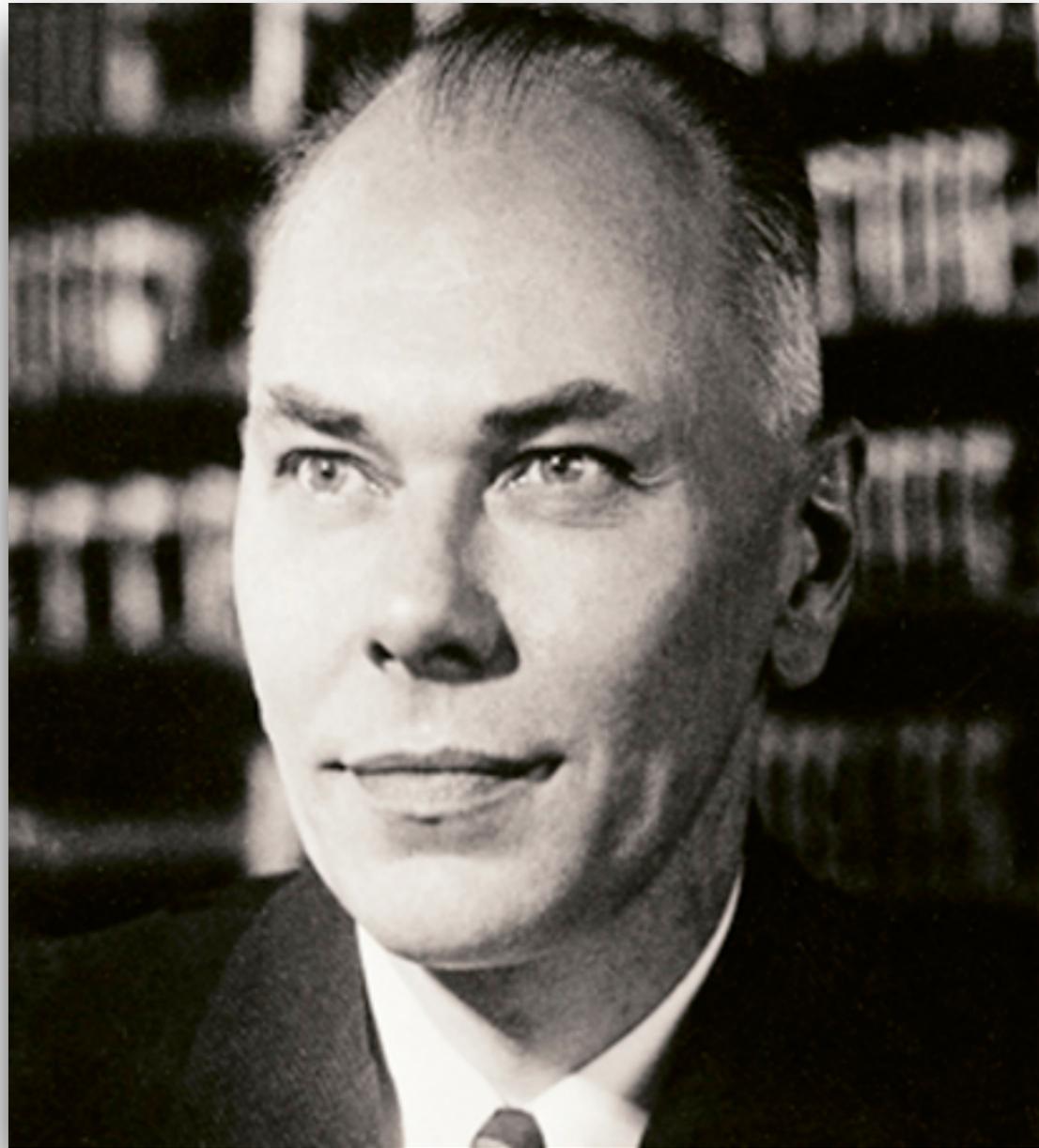
Why obsess about giving good talks

Why obsess about giving good talks



Howard Aiken

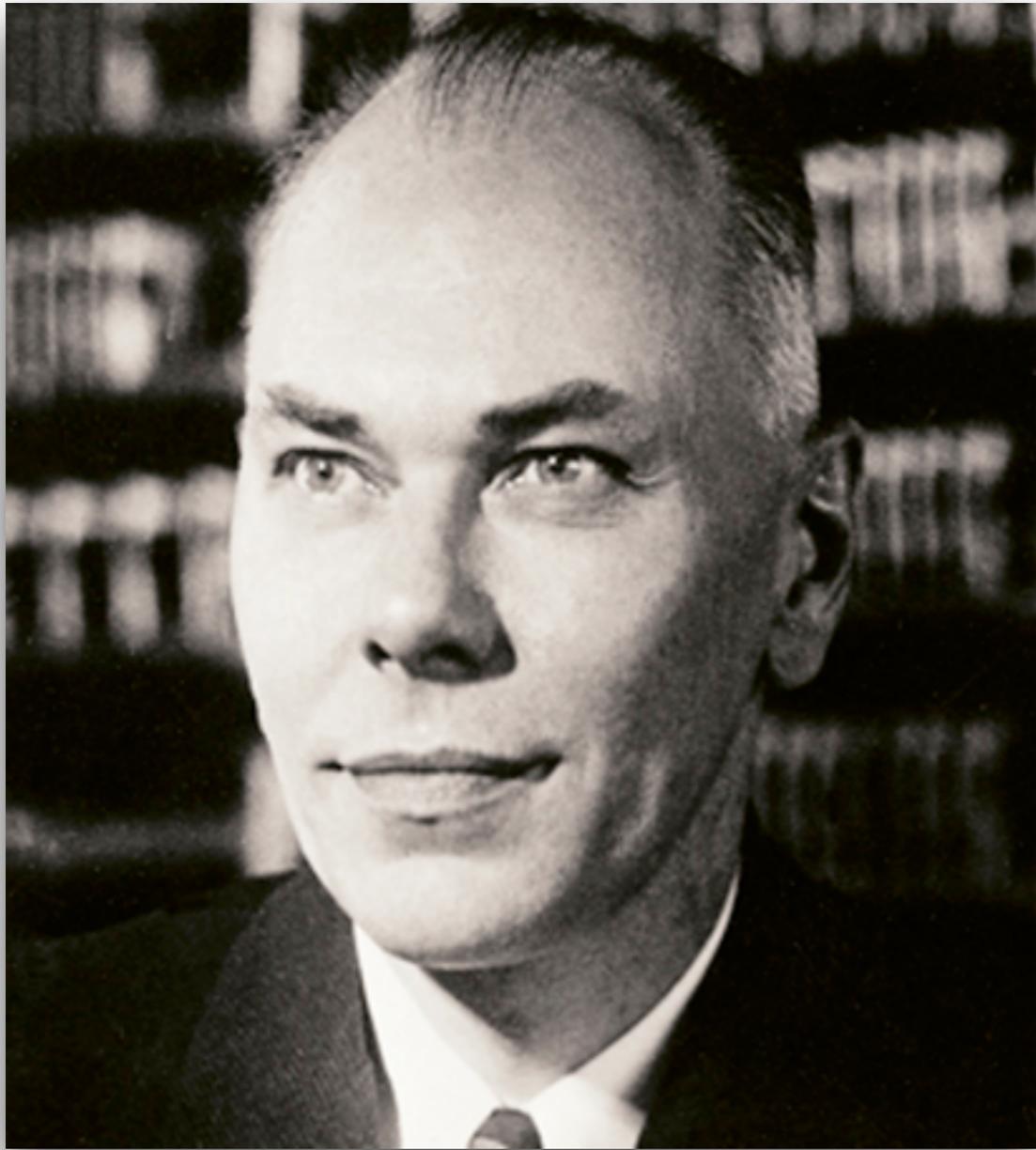
Why obsess about giving good talks



*“Don't worry about
people stealing an idea...”*

Howard Aiken

Why obsess about giving good talks



Howard Aiken

*“Don't worry about
people stealing an idea...
If it's original, you will have to
ram it down their throats.”*

Why obsess about giving good talks



Large & Captive Audience

Why obsess about giving good talks

Captive Audience: to Inspire

New *research* ...

New *collaborators* ...

New *users* ...

New *jobs* ...

How to go about giving good talks

How to create *content*

How to *design* talks

How to *deliver* talks

How to go about giving good talks

How to create *content*

How to *design* talks

How to *deliver* talks

How to *design* talks

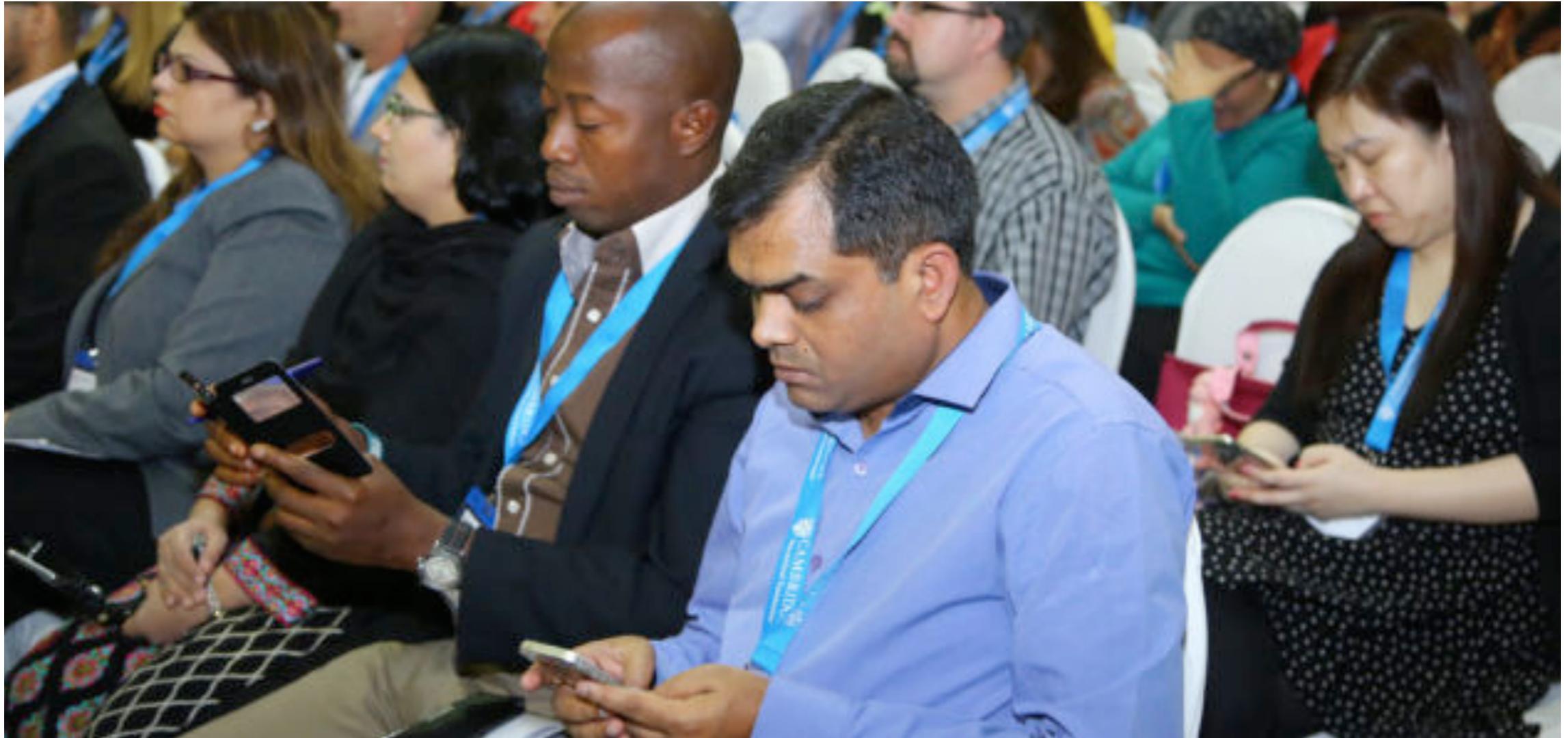
What is our *goal*?

What is our *goal*?



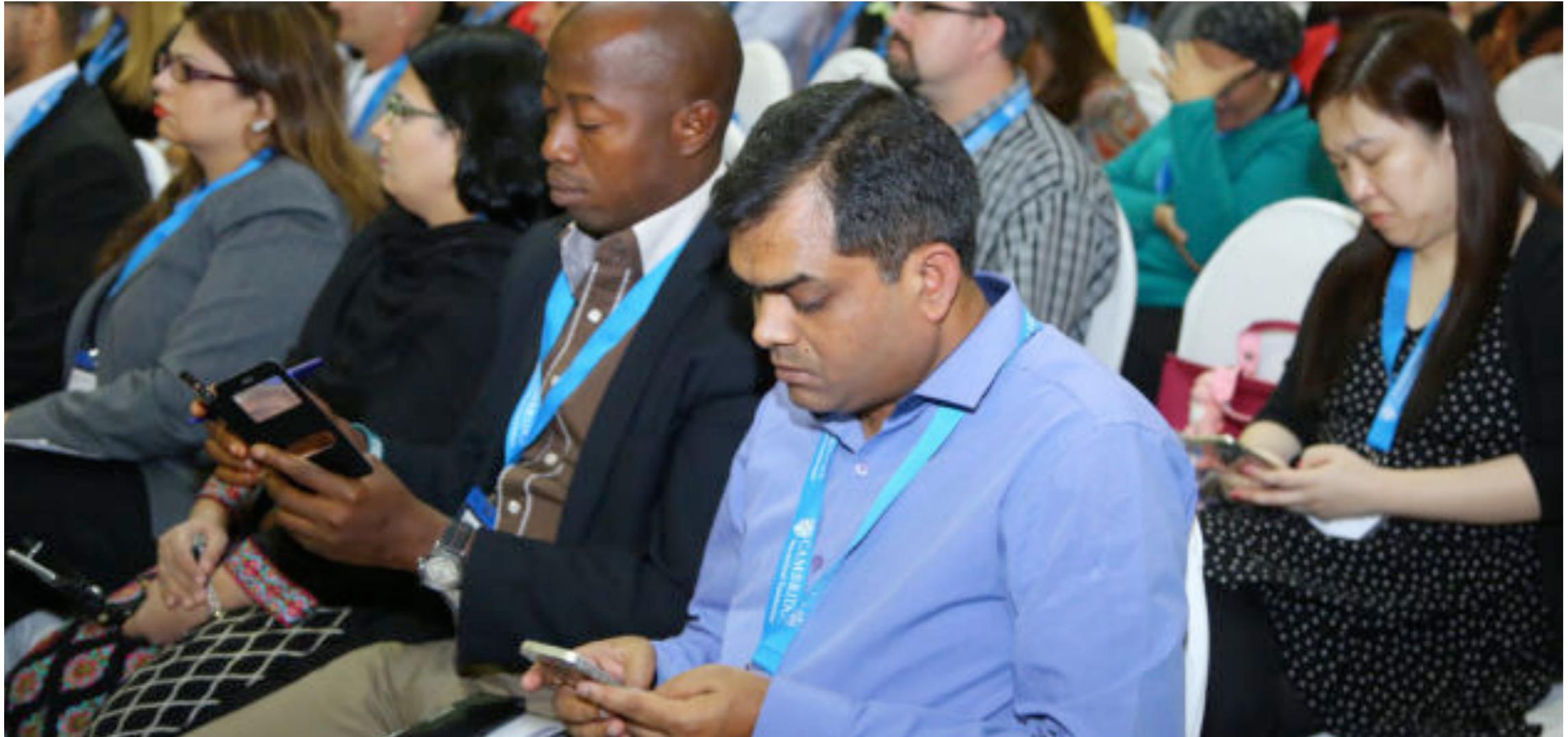
Spread wisdom ...

What is our *goal*?



... without losing to Candy-Crush!

What is our *goal*?



Goal: *Enable Focus*

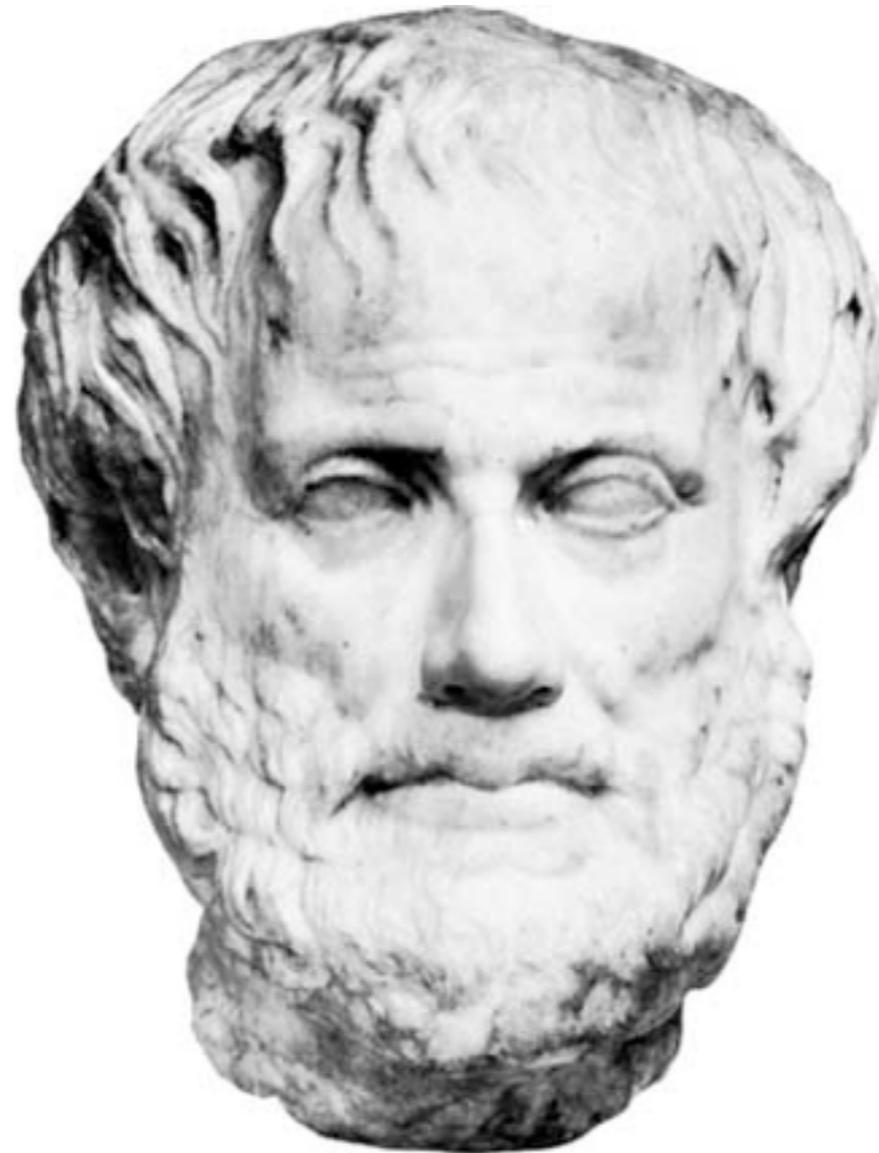
Eliminate opportunities to “get lost”

How to *design* talks

Enable Focus

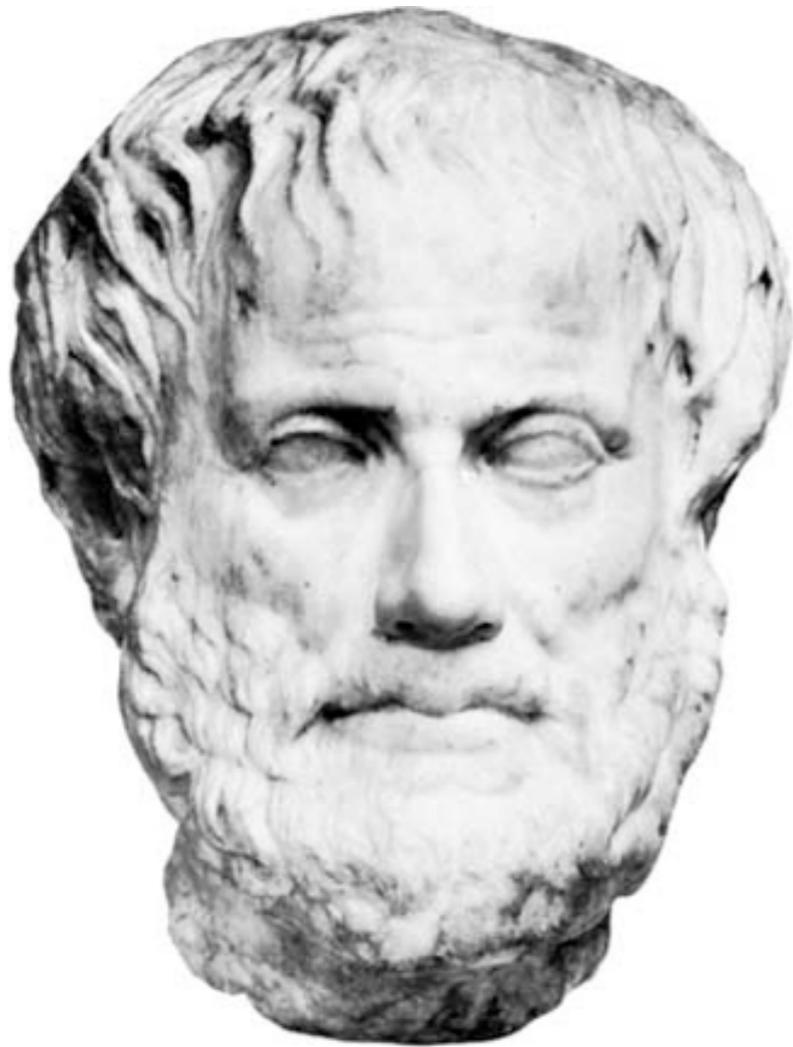
Eliminate opportunities to “get lost”

How to *design* talks



Aristotle

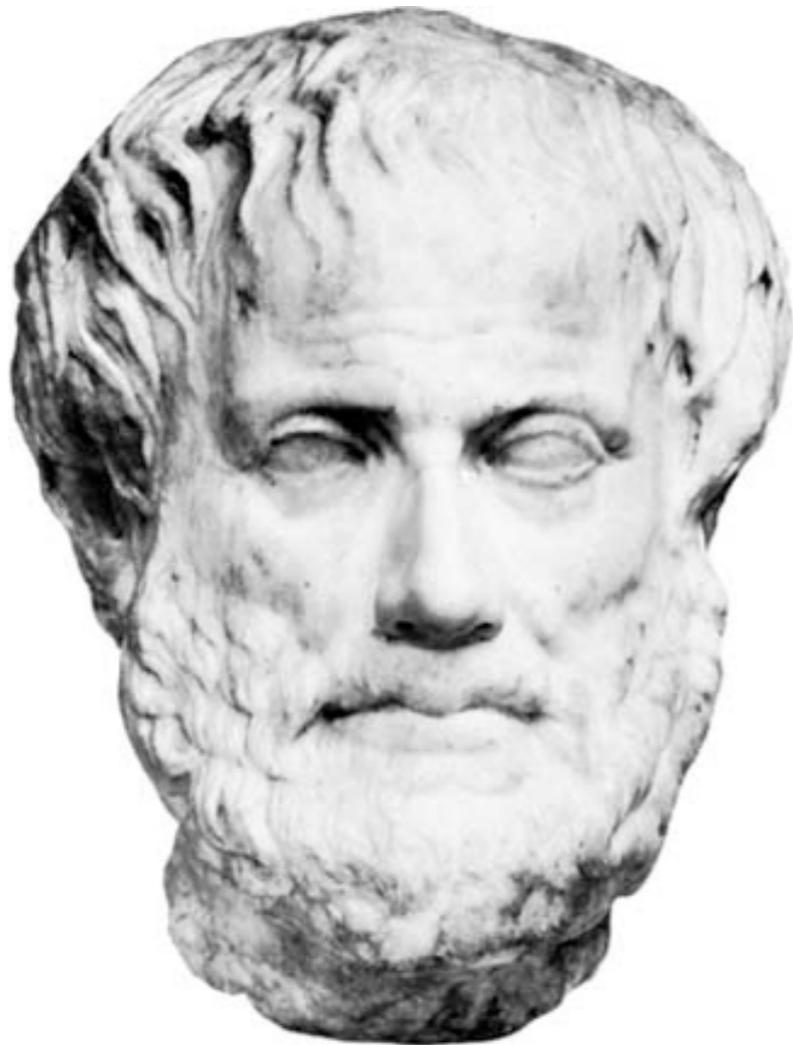
How to *design* talks



Aristotle

1. Tell them what you *will tell* them
2. *Tell* them
3. Tell them what you *just told* them

How to *design* talks



1. Tell them what you *will tell* them
2. *Tell* them
3. Tell them what you *just told* them

~~Aristotle~~

“Three parts of a sermon”, 1908

How to *design* talks

How to draw an owl

1.



1. Draw some circles

How to *design* talks

How to draw an owl

1.



1. Draw some circles

2.



2. Draw the rest of the f**king owl

How to *design* talks

I. Story
“outline”

II. Scene
“section”

III. Frame
“slide”

I. Story

I. Story



1. Identify your *goal*

Key ideas you want to “ram down”

I. Story



1. Identify your *goal*

Story is a *path to* your goal

I. Story

Problem



Solution

1. Identify your goal

Story is a *path to* your goal

I. Story

Problem



Solution

Story is a *path to* your goal

How to design a path?

I. Story

Problem



Solution

2. Identify *landmarks* along path

How to design a path

I. Story

Problem



Solution

2. Identify *landmarks* along path

How to design a path

I. Story

Problem



Solution

2. Identify *landmarks* along path

How to design a path

I. Story : Example

Problem



Solution

I. Story : Example

Problem



Solution

What is my *goal* ?

I. Story : Example

“Fickle Audience”



Solution

What is my *goal* ?

I. Story : Example

“Fickle Audience”



“Enable Focus”

What is my *goal* ?

I. Story : Example

“Fickle Audience”



“Enable Focus”

What are my *landmarks*?

I. Story : Example

“Fickle Audience”



I. Story

“Enable Focus”

What are my *landmarks*?

I. Story : Example

“Fickle Audience”



I. Story

II. Scene

“Enable Focus”

What are my *landmarks*?

I. Story : Example

“Fickle Audience”



I. Story

II. Scene

III. Frame

“Enable Focus”

What are my *landmarks*?

I. Story

What is my *goal*?

What are my *landmarks*?

I. Story

What are my *landmarks*?

How to pick good landmarks?

How to pick good landmarks?

Definition before use

How to pick good landmarks?

Definition before use



(do not do this!)

Problems *before* solutions
Intuition *before* formalism

How to pick good landmarks?

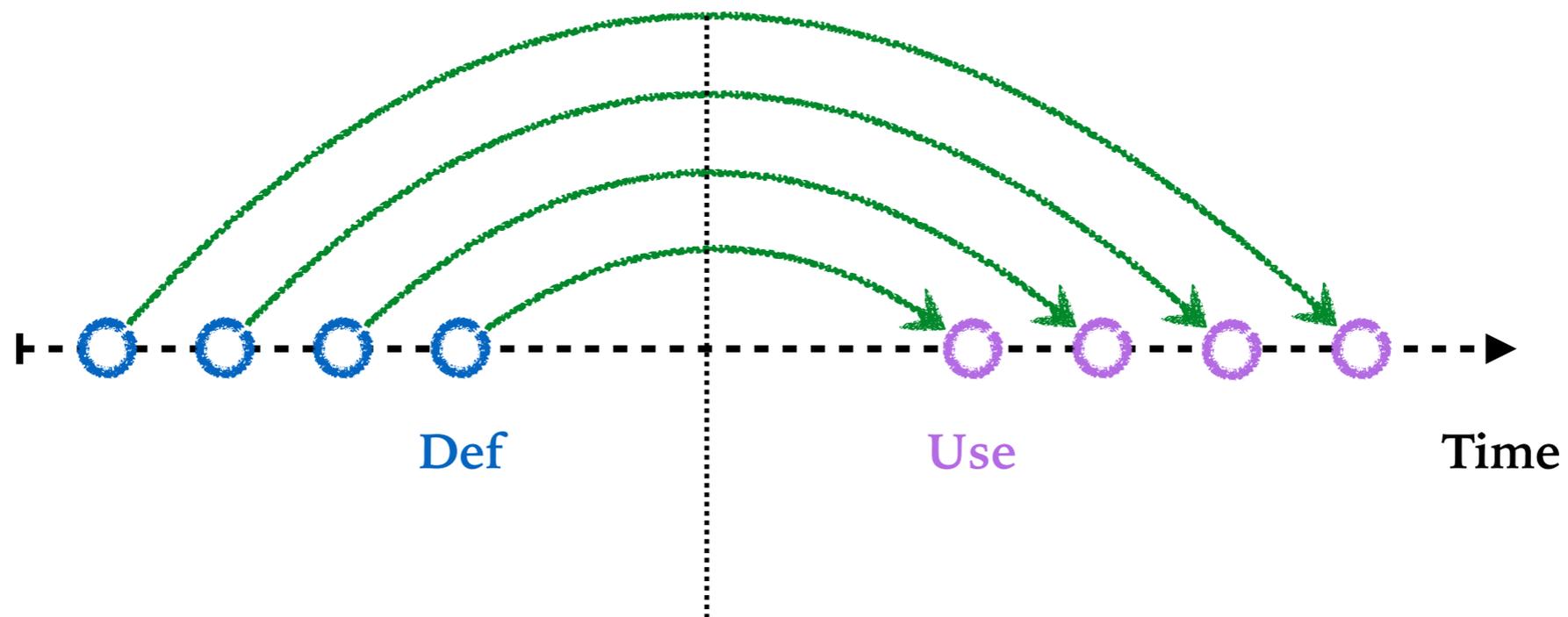
Definition before use

But minimize bandwidth!

“*State*” that audience must remember

How to pick good landmarks?

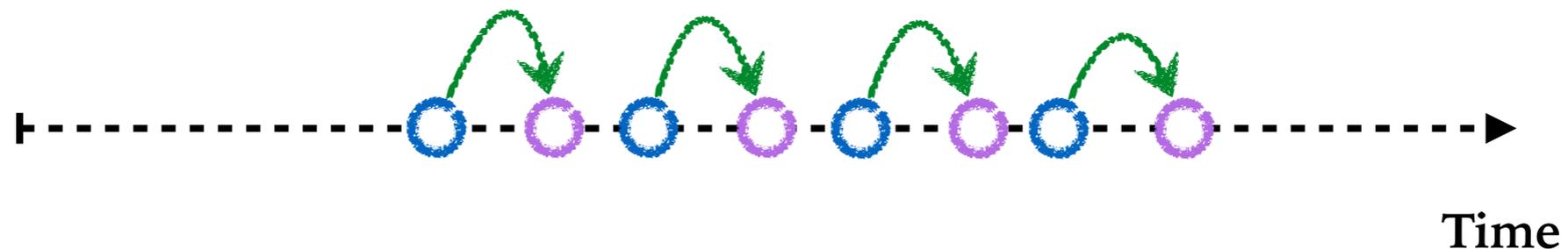
Definition before use



But minimize bandwidth!

How to pick good landmarks?

Definition before use

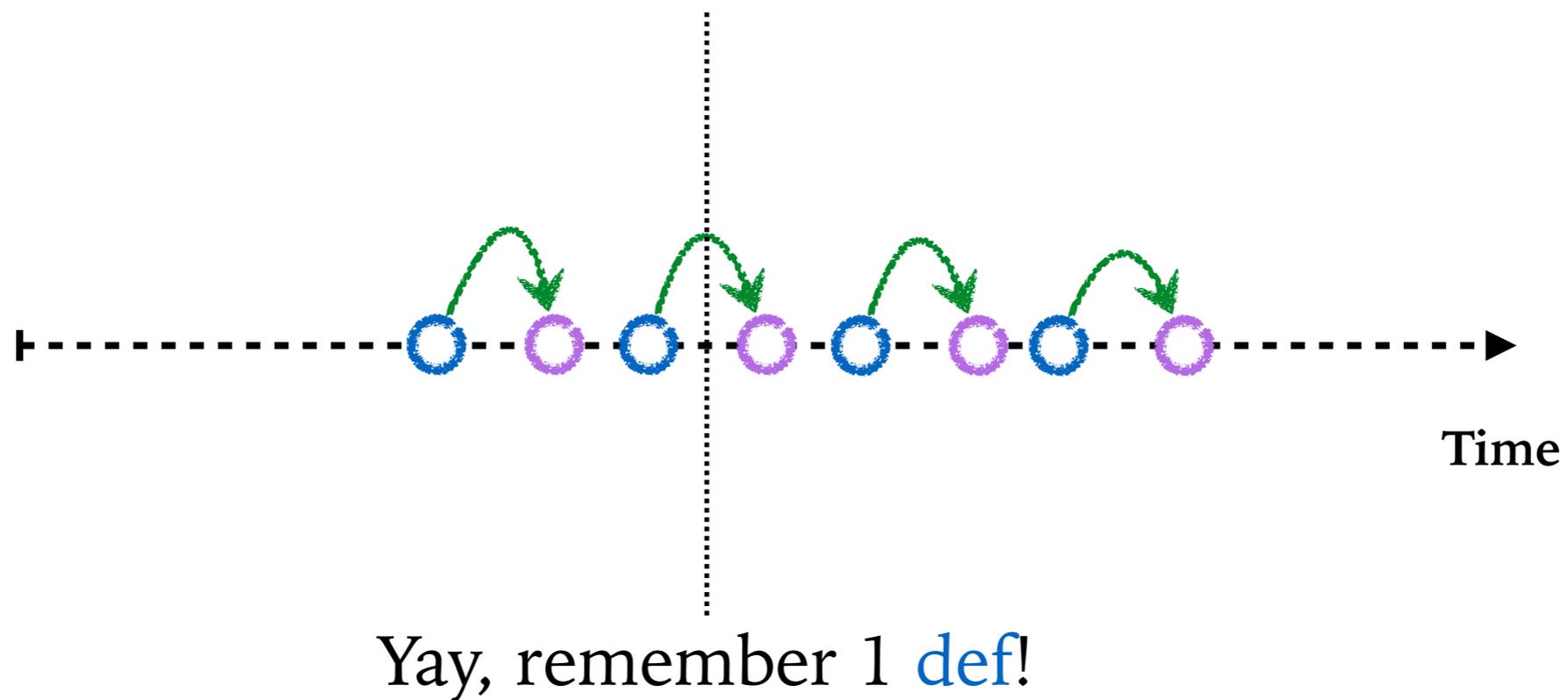


Re-order def and use

But minimize bandwidth!

How to pick good landmarks?

Definition before use



But minimize bandwidth!

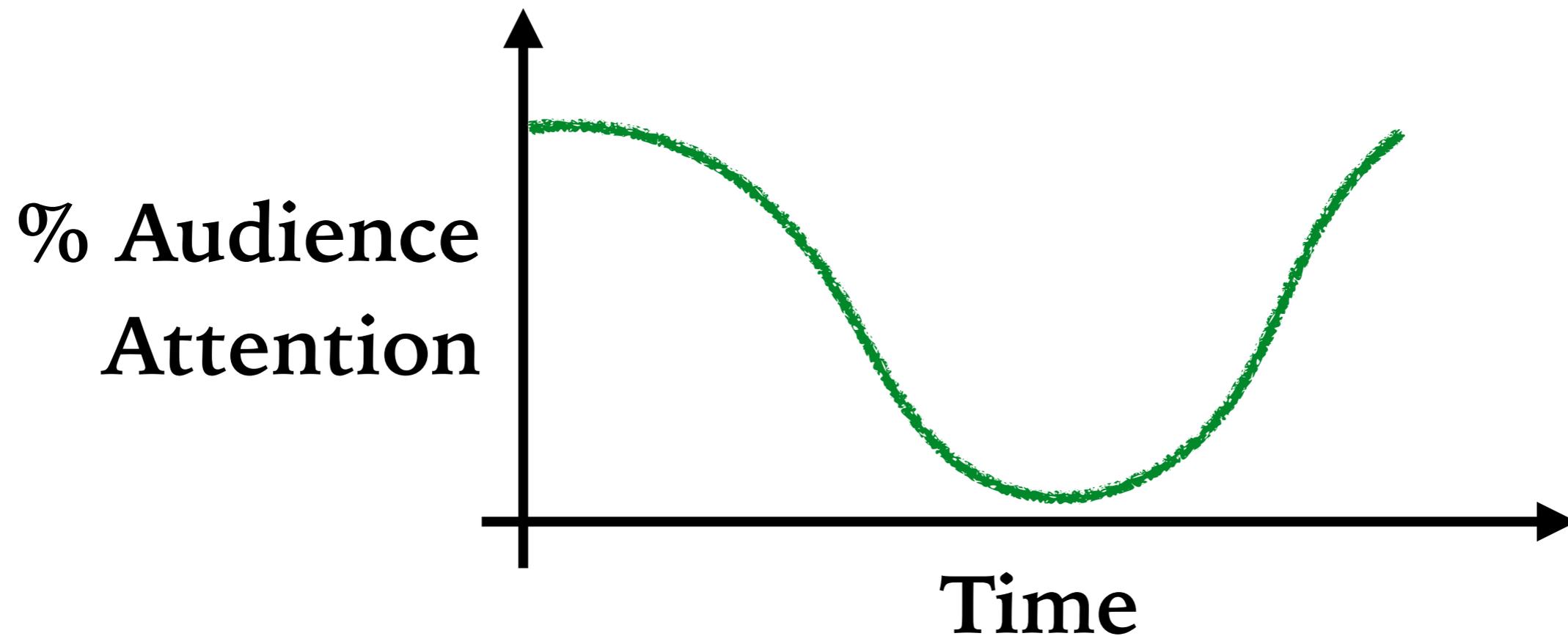
How to pick good landmarks?

Definition before use

V-shaped complexity

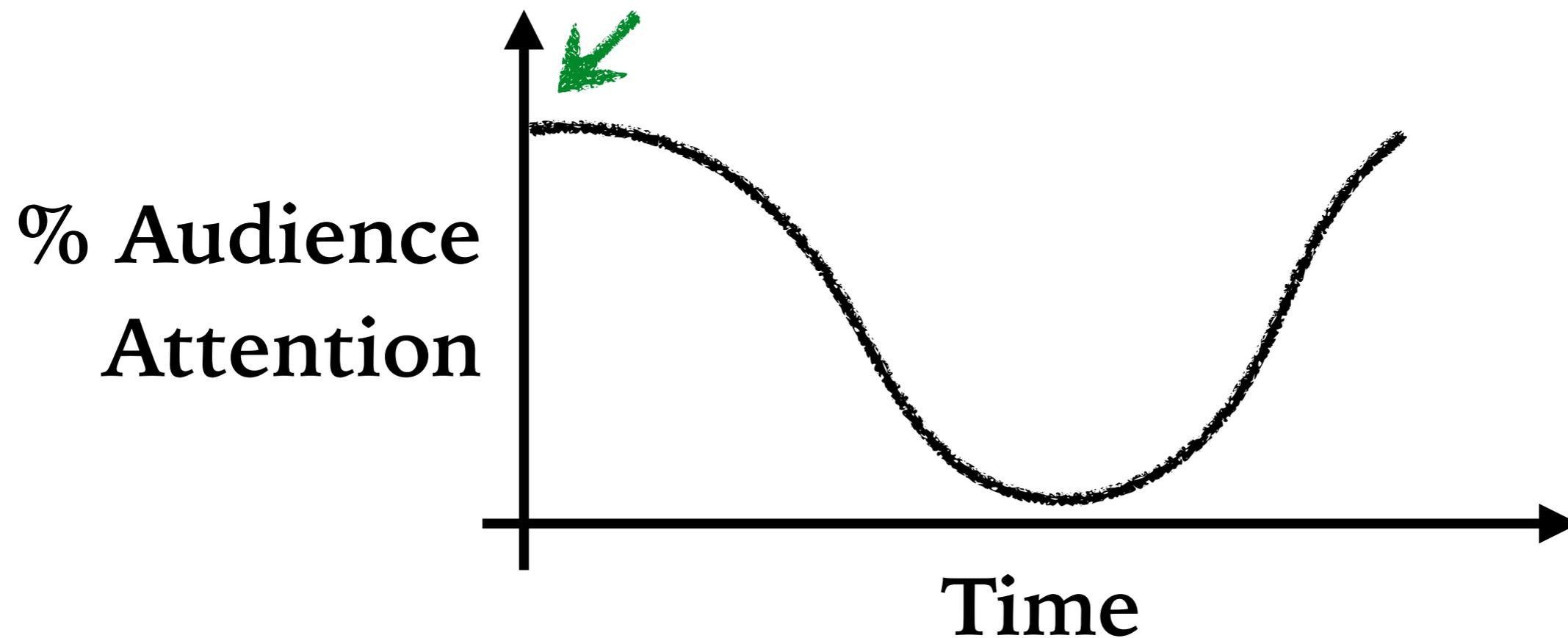
How to pick good landmarks?

V-shaped complexity



How to pick good landmarks?

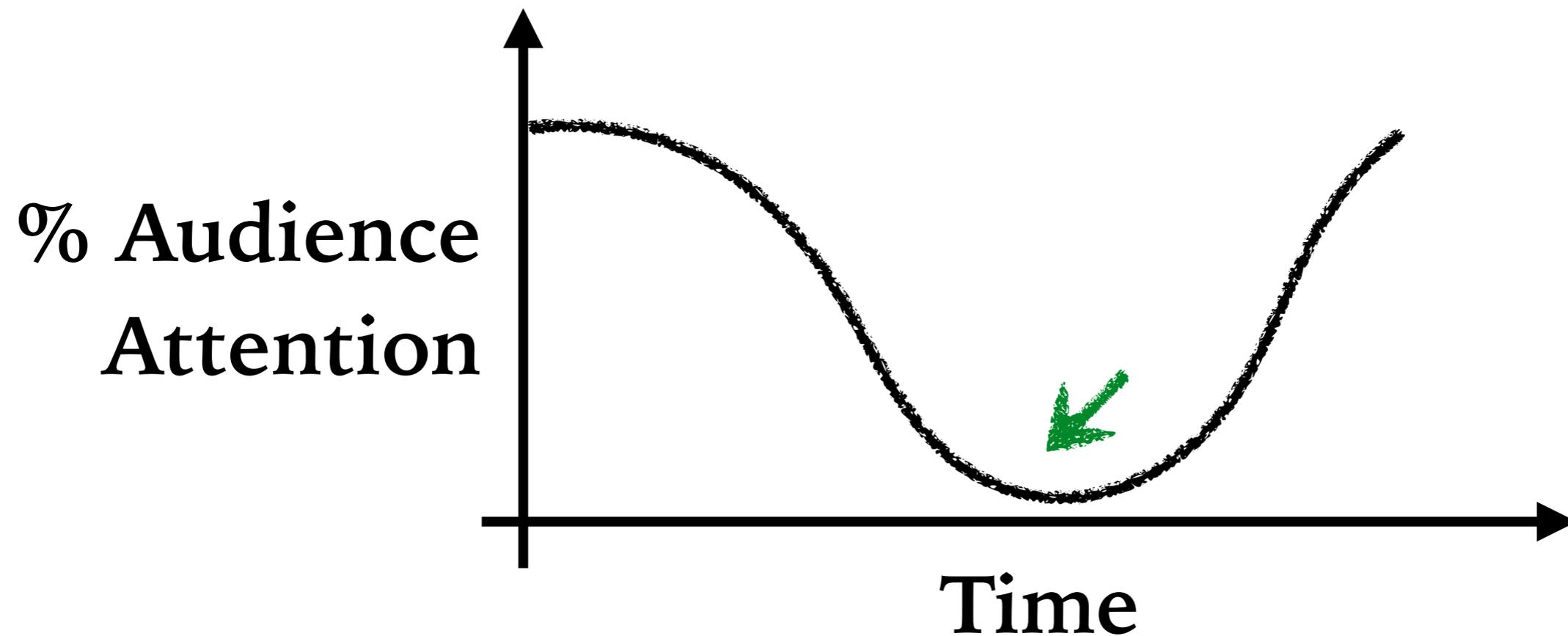
V-shaped complexity



Start at high-level motivation

How to pick good landmarks?

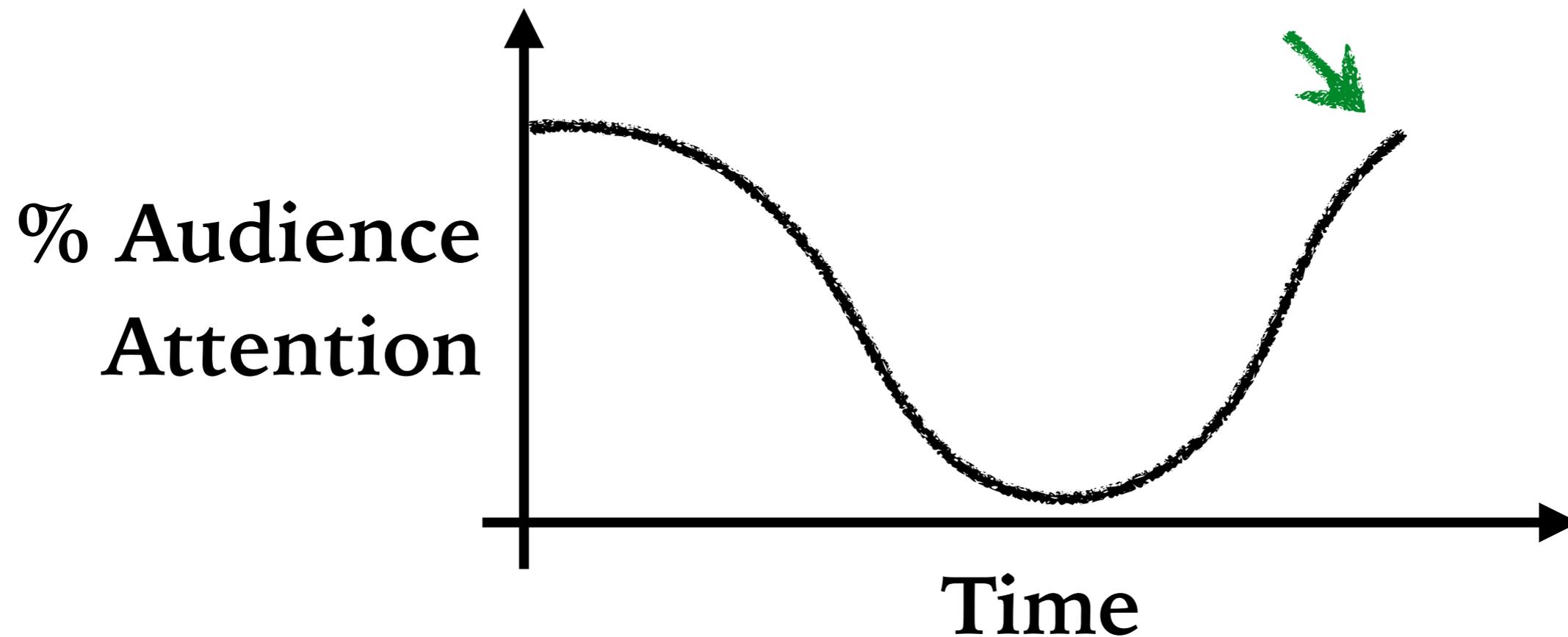
V-shaped complexity



Gradually introduce technical details

How to pick good landmarks?

V-shaped complexity



End with high-level summary & consequences

How to pick good landmarks?

Definition before use

V-shaped complexity

Landmarks are outline

How to pick good landmarks?

Landmarks are outline

How to *design* talks

I. Story

II. Scene

III. Frame

Repetition *reinforces* landmarks

Prevents “getting lost”, *enabling focus*

How to pick good landmarks?

Definition before use

V-shaped complexity

Landmarks are outline

I. Story

How to pick good landmarks

How to *design* talks

I. Story

II. Scene

III. Frame

II. Scene

Short path between landmarks

II. Scene

Short path between landmarks

Show, don't tell

II. Scene

Show, don't tell



(Only) use *examples*

II. Scene

Show, don't tell

Sequence of transitions

(Not a set of slides)

II. Scene

Show, don't tell

Sequence of transitions

Show “landmark” (*by example!*)

II. Scene

Show “landmark” (*by example!*)

Step 1: Identify *complete* example

II. Scene

Show “landmark” (*by example!*)

Step 1: Identify *complete* example



“Perfection is achieved ... *when there is nothing left to take away.*”

II. Scene

Show “landmark” (*by example!*)



Step 1: Identify *complete* example

Start by creating the scene's *last* slide

II. Scene

Show “landmark” (*by example!*)



Step 1: Identify *complete* example

Does it *show* essential elements?

II. Scene

Show “landmark” (*by example!*)



Step 1: Identify *complete* example

Is it as *simple* as possible?

II. Scene

Show “landmark” (*by example!*)



Step 1: Identify *complete* example

Does it *fit nicely* on the screen?

II. Scene

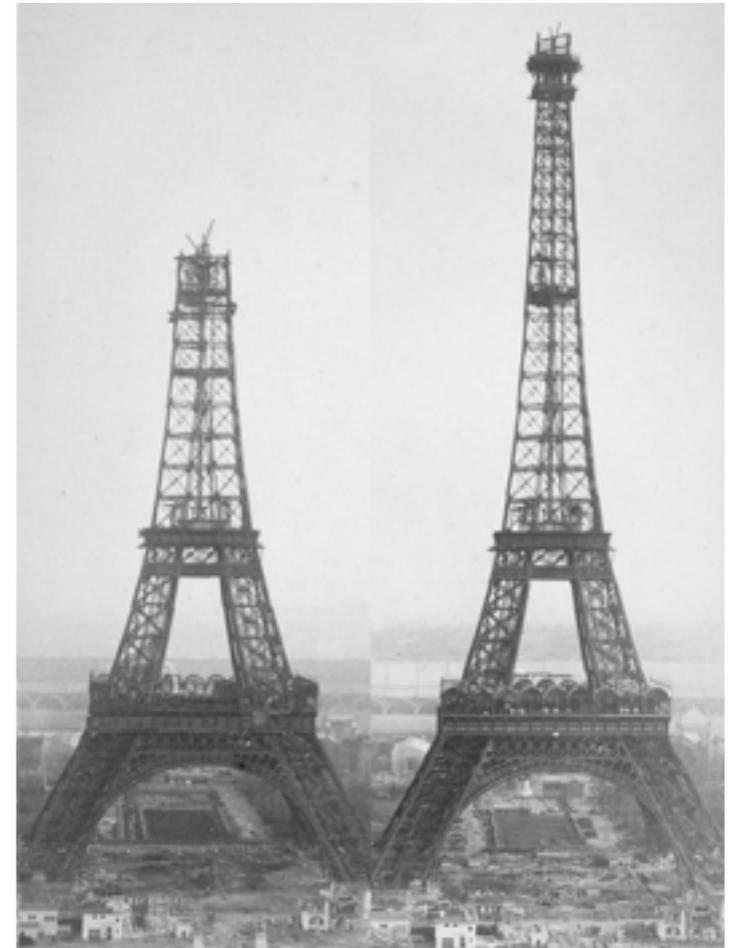
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

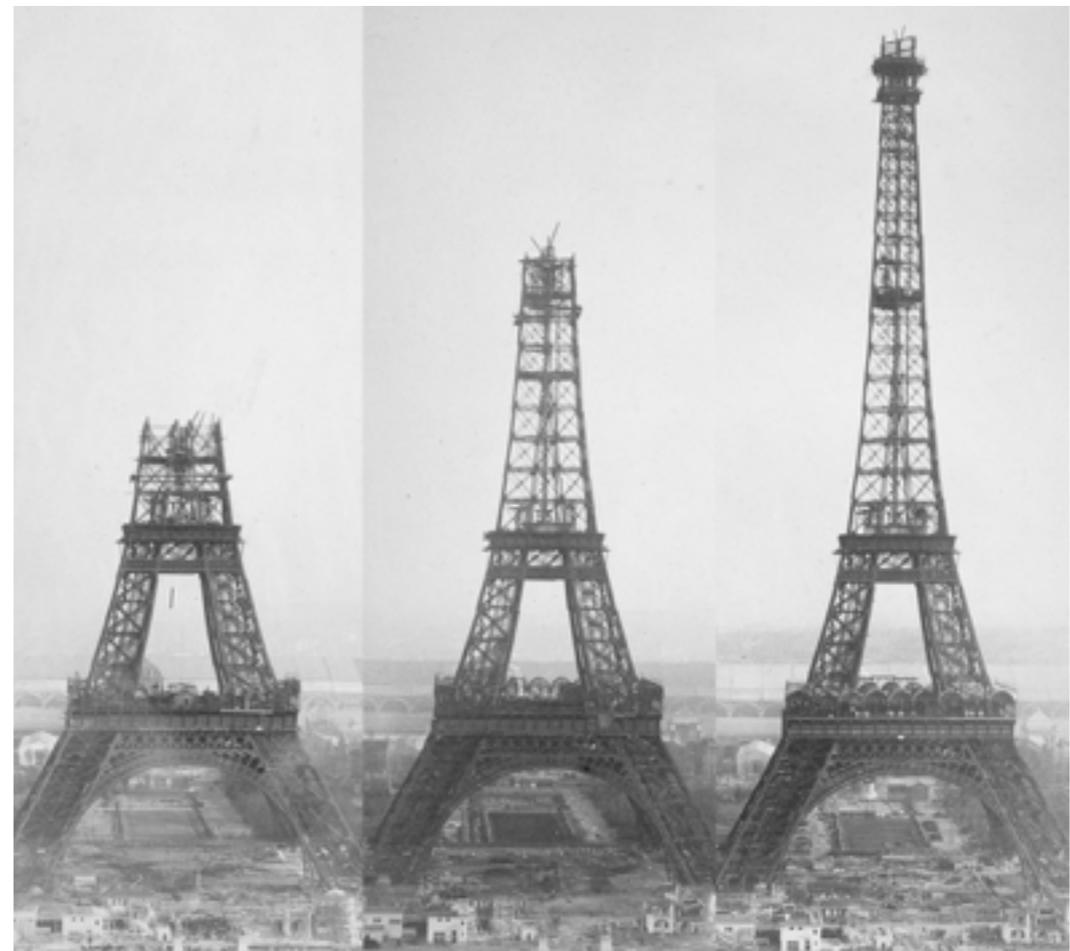
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

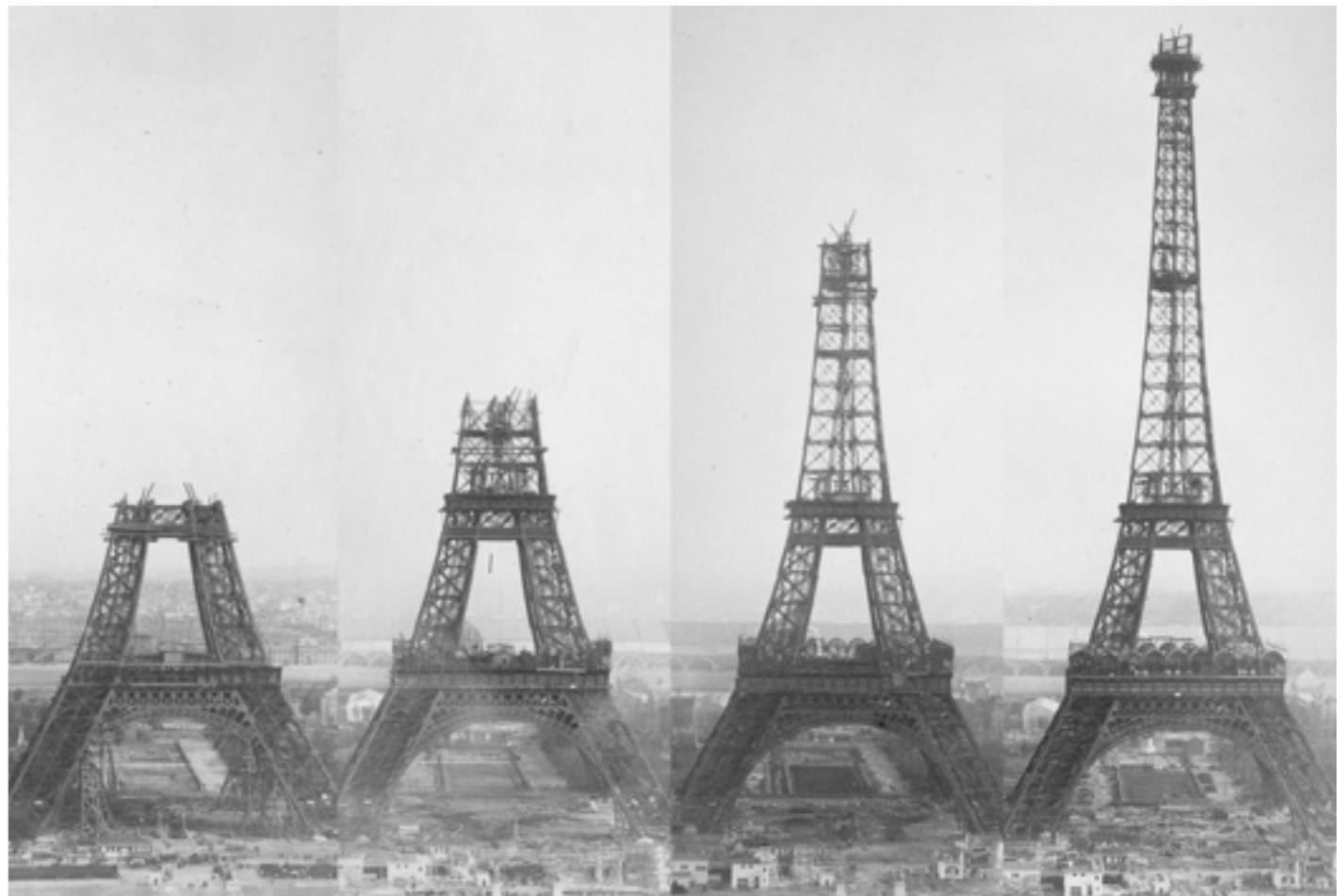
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

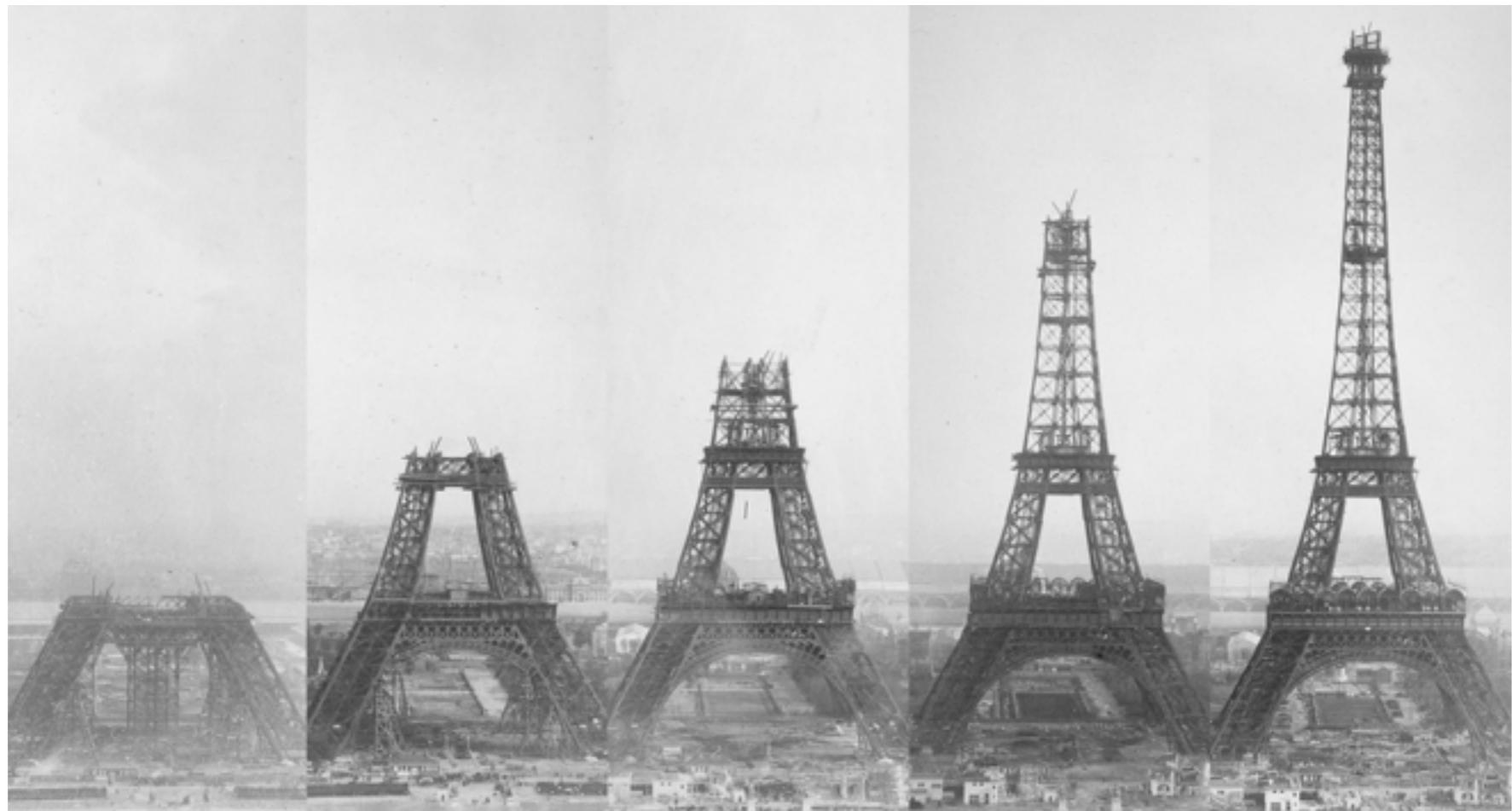
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

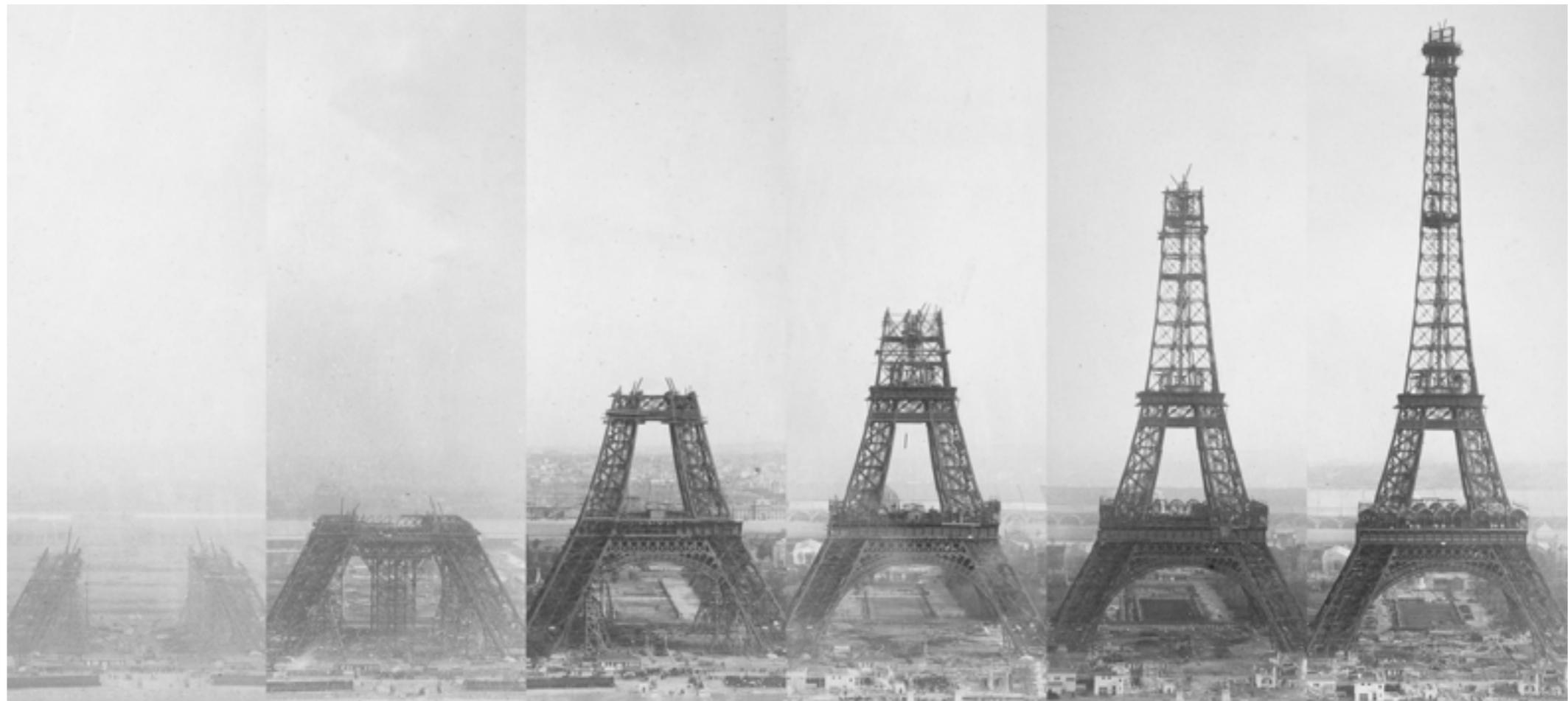
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

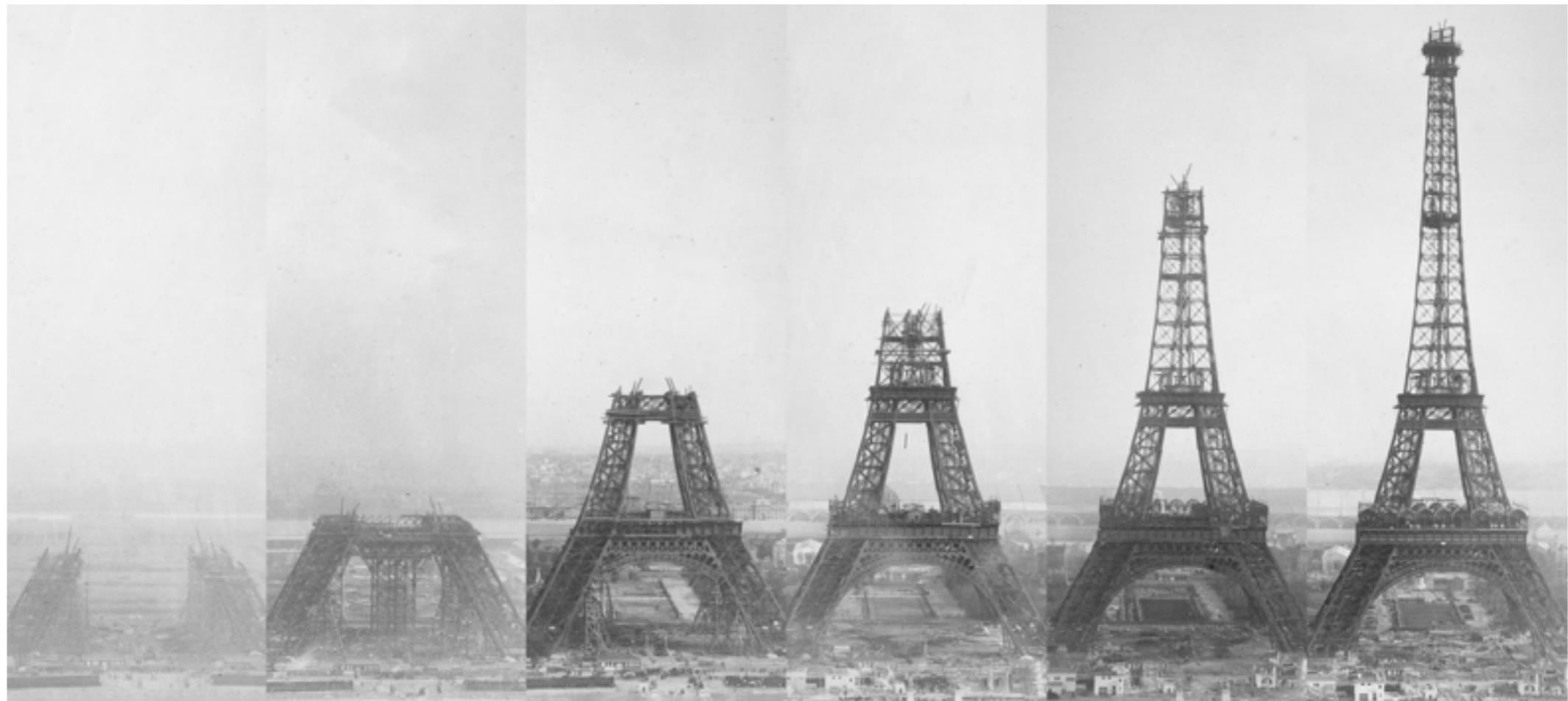
Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

II. Scene

Show “landmark” (*by example!*)



Step 2: Work back, *removing* elements

Result: Seq. of transitions *building upto* landmark

II. Scene

Sequence of transitions

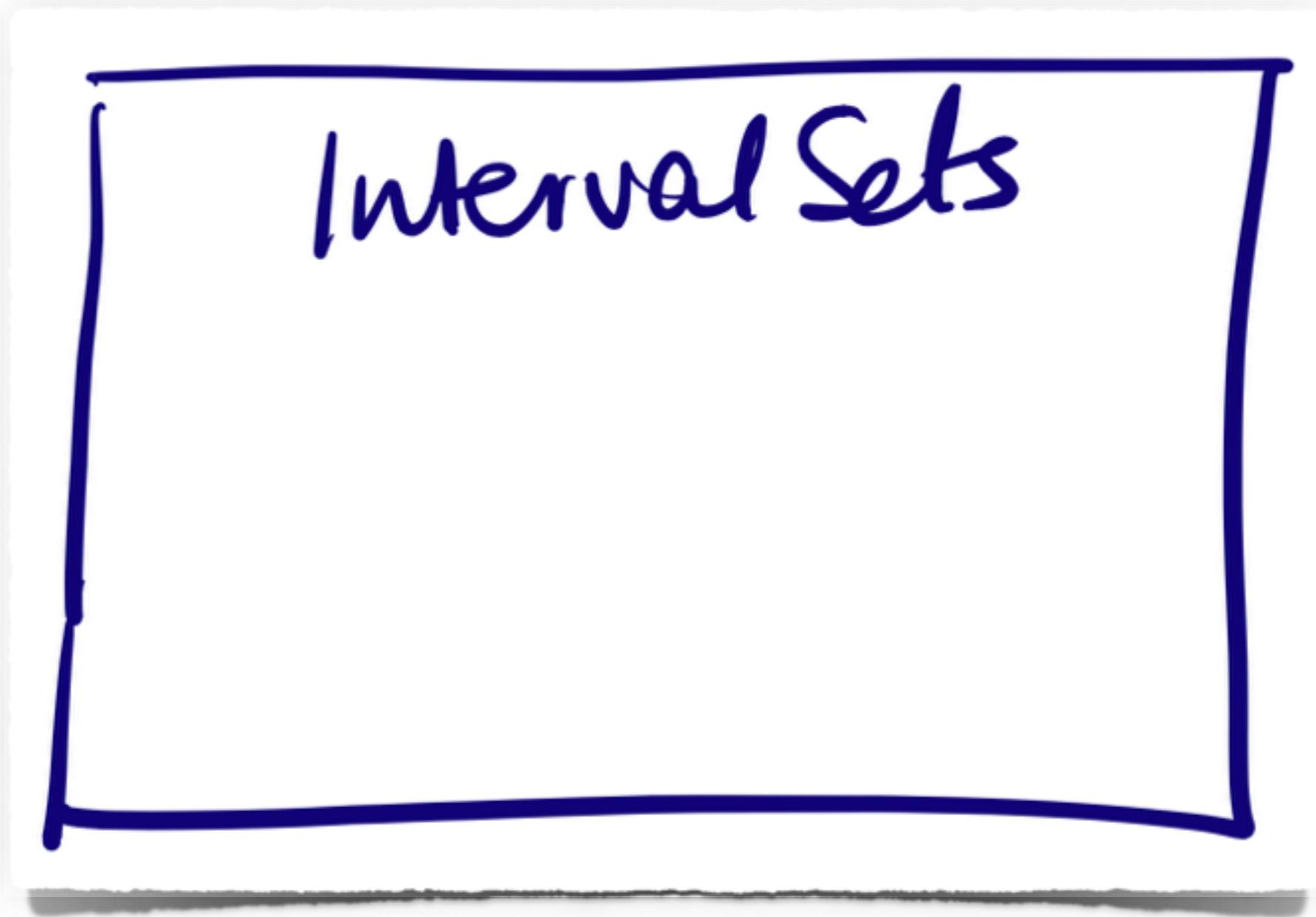
Show “landmark” (*by example!*)

Ideally, make sense *without speech*

II. Scene

(by example!)

Scene: Example



Landmark

Scene: Example

2

Represent a Set of Integers by

$\{ \dots \}$

~~Bag~~ Ordering into a List

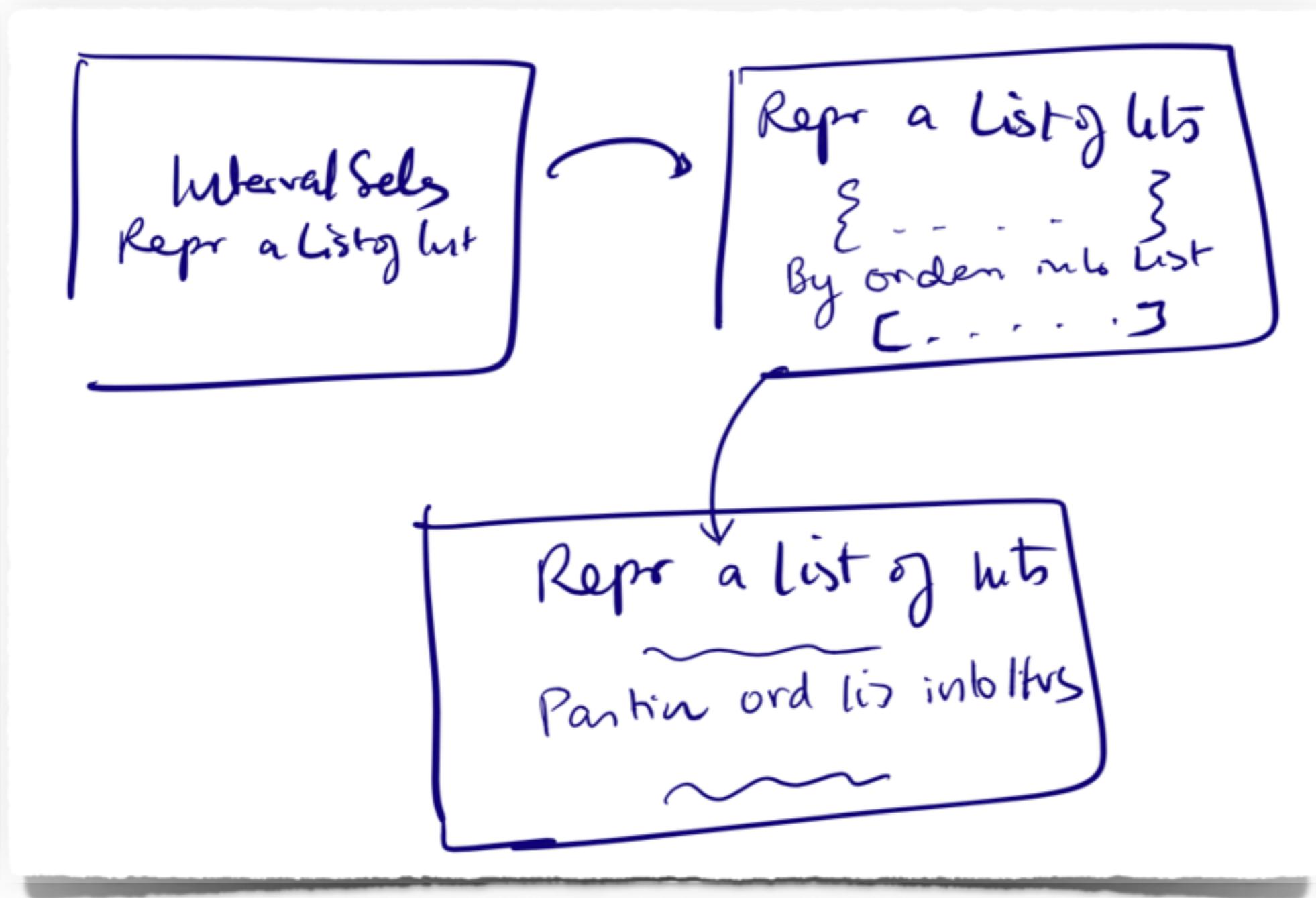
$[\dots]$

Partitioning $OrdList$ into Compact Inters

$[(,) , \dots]$

Complete Example

Scene: Example



Sequence of Transitions

User-defined Invariants

Interval Sets

Data Structure to Represent Sets

[Breitner et al. 2017]

“Monkey Test”: Does scene make sense *without audio*?

II. Scene

Sequence of transitions

Show “landmark” (*by example!*)

Should make sense *without* audio

How to *design* talks

I. Story

II. Scene

III. Frame

III. Frame

What is on a *single* slide?

III. Frame

What *one thing* to focus on?

Be Minimal

Be Minimal

Make the focus *obvious**

* c.f. Shewchuk's *12-words-per-slide* rule

Be Minimal

Don't *ever* make slides like this!

- Where do I even begin with its awfulness?
- What part of it are you supposed to be *focussing* on? The top? The bottom? Are you supposed to be reading it while the speaker talk? (Candy crush, here we come...)
- First, bullet points are the devil: avoid them like the freaking plague.
 - The only thing worse than bullet points are nested bullets.
 - Why on earth does keynote even *let* you go three levels deep.
- Hey! Did you get this far down? (Poor you.)
- Oh, I saved the best for last. NEVER NEVER EVER wrap around text. There is nothing that destroys focus more quickly than making your optic muscles perform a “carriage return” — i.e. having to swerve all the way backwards after hitting the end of the line.
- Excuse me now. My fingers, eyes, and soul are hurting.

Be Minimal

Don't *ever* make slides like this!

- Where do I even begin with its awfulness?
- What part of it are you supposed to be *focussing* on? The top? The bottom? Are you supposed to be reading it while the speaker talk? (Candy crush, here we come...)
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- Excuse me now. My fingers, eyes, and soul are hurting.

III. Frame

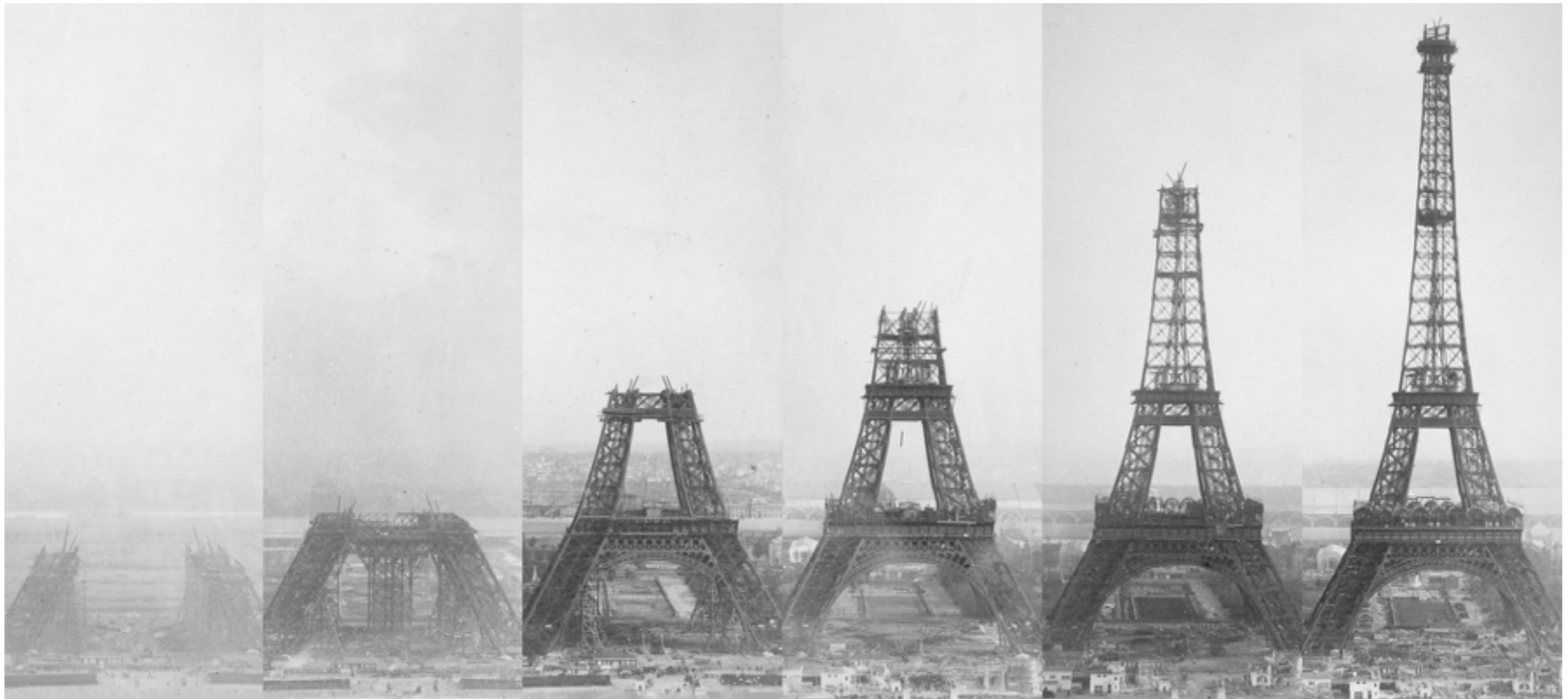
Make the focus *obvious*

Be Minimal

Be Incremental

Be Incremental

Gradually *build up to* landmark



On each slide focus is on the “*diff*”

Be Incremental

Gradually *build up to* landmark

Data Structure to Represent Sets

{ 7 1 10 3 11 2 9 12 4 }

On each slide focus is on the “*diff*”

III. Frame

Make the focus *obvious*

Be Minimal

Be Incremental

Highlight the focus

Highlight the focus



Where's Waldo?

Highlight the focus



Highlight the focus



Here's Waldo!



Highlight the focus

Data Structure to Represent Sets

{ 7 1 10 3 11 2 9 12 4 }

By **Ordering** into a sequence...

[1 2 3 4 7 9 10 11 12]

and **Partitioning** into Intervals

[1-5 7-8 9-13]

III. Frame

Make the focus *obvious*

Be Minimal

Be Incremental

Highlight the focus

How to *design* talks

I. Story

Find *landmarks* towards goal

II. Scene

Show landmark by *transitions*

III. Frame

Make the focus *obvious*

How to *design* talks

I. Story

II. Scene

III. Frame



Iterate!

Circular dependencies

How to go about giving good talks

How to create *content*

How to *design* talks

How to *deliver* talks

How to *deliver* talks



Adrienne Porter Felt 

@__apf__

Follow



I asked James Mickens what his trick was for giving a truly funny and insightful talk. His answer: you spend three months preparing and study videos of other inspiring speakers. Actually pretty helpful to know the amount of work that goes into a really good talk

9:53 AM - 17 Aug 2018

<https://mickens.seas.harvard.edu/wisdom-james-mickens>

How to *deliver* talks



Preachers

How to *deliver* talks



Preachers



Politicians

How to *deliver* talks



Preachers



Politicians



Comedians

How to *design* talks

I. Story

Landmarks towards goal

II. Scene

Sequence of *transitions*

III. Frame

Make the focus *obvious*

Recommended Reading

Derek Dreyer

How to Give Talks That People Can Follow

<https://people.mpi-sws.org/~dreyer/talks/talk-plmw17popl.pdf>

Jonathan Shewchuk

Giving an Academic Talk

<https://people.eecs.berkeley.edu/~jrs/speaking.html>

END