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# INK: THE NARRATIVE SCRIPTING LANGUAGE BEHIND 80 DAYS AND SORCERY

@inkleStudios @joethephish





£9,779   **DAY 30**   WEDNESDAY  
10:44 AM



DAY 2  
Arrived in Munich at 10:00 PM

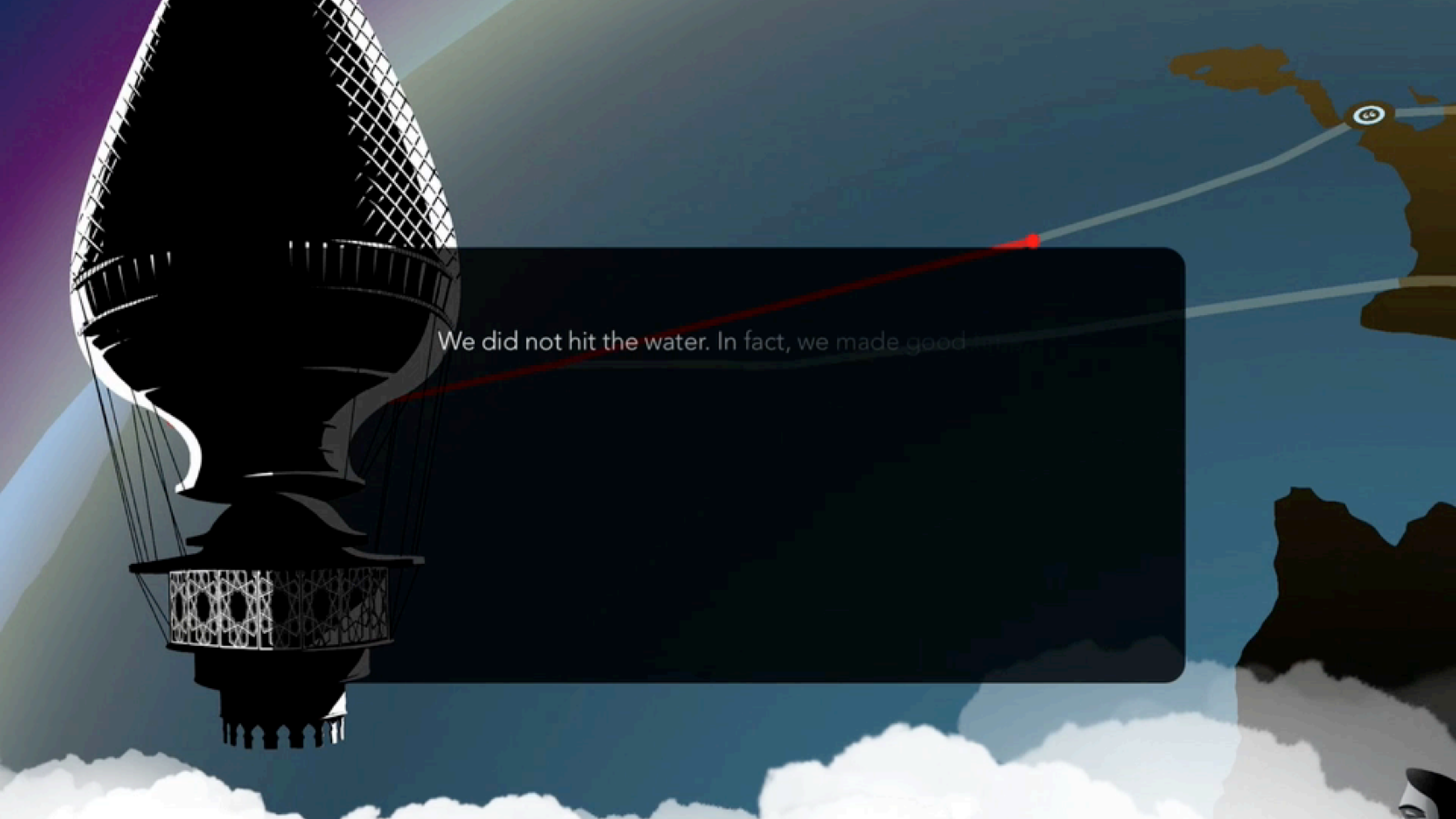
£200

# 80 DAYS



♥ 65

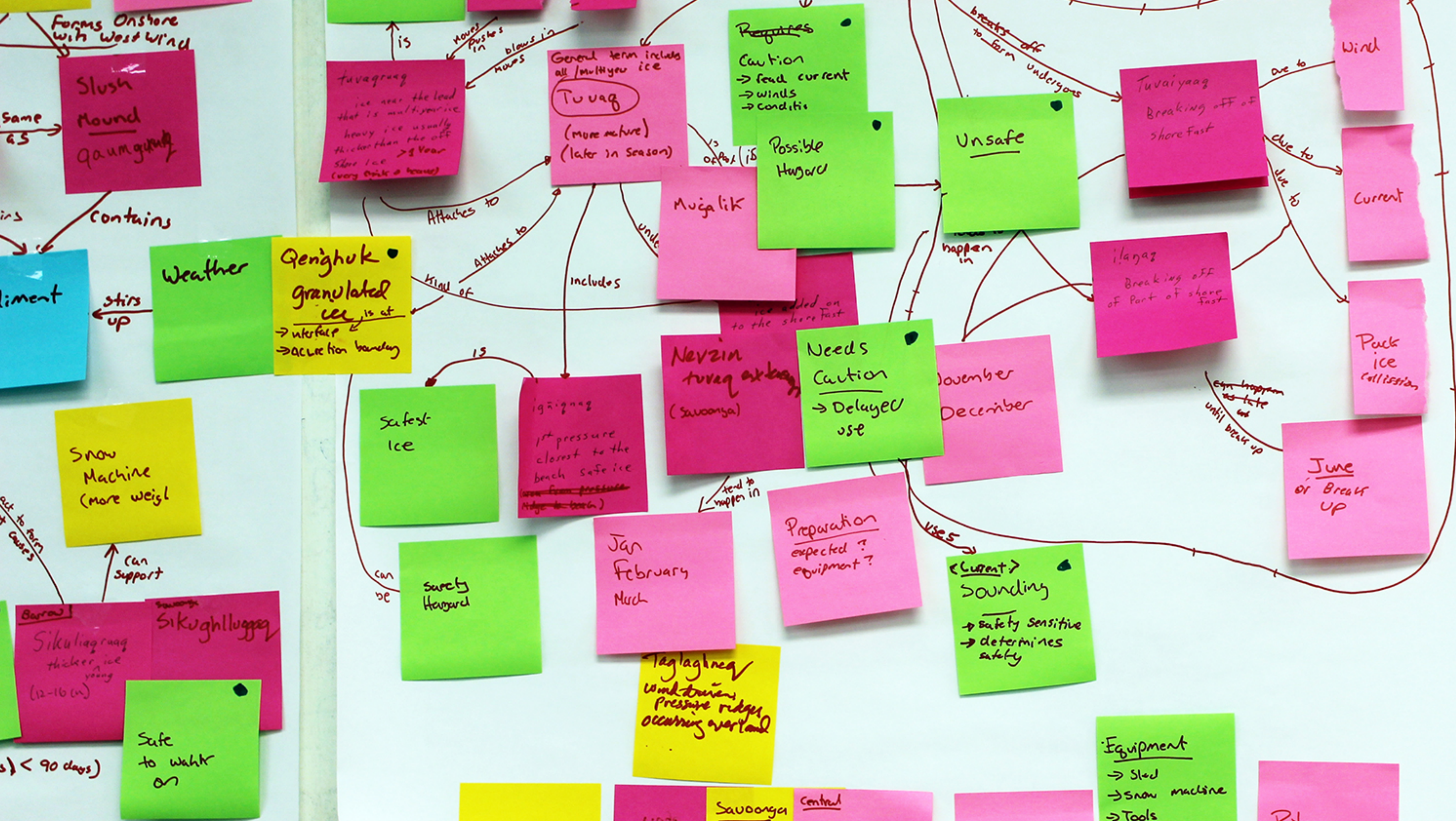




We did not hit the water. In fact, we made good time.

- ▶ **PAST** How ink was pivotal for 80 Days and Sorcery
- ▶ **FUTURE** What we learned, and the improvements we made
- ▶ **YOUR GAME** Getting started with ink in your own game











sign in

new

restart tutorial

contents

write

read

Interactive what?

Unlink

What is an interactive story? Well, you're reading one!

Except of course, this isn't really a story. This is a tutorial. In most interactive stories, you - the reader - would be telling the story what you want the main character to do, by making choices.

But for now, we're trying to learn how it works. So let's get going.

2 links.

Okay

I still don't get it. An example, please?

Add option

## Contents

▶ The beginning 1 end

▶ Introduction

▼ Interactive what?

What is an interactive story? Well, you're reading one!

Except of course, this isn't really a story. This is a tutorial. In most interactive stories, you - the reader - would be telling the story what you want the main character to do, by making choices.

But for now, we're trying to learn how it works. So let's get going.

2 links.

Oh, okay. Here goes. Um...

▶ Example story

▶ Choose a tutorial

▶ Sharing stories

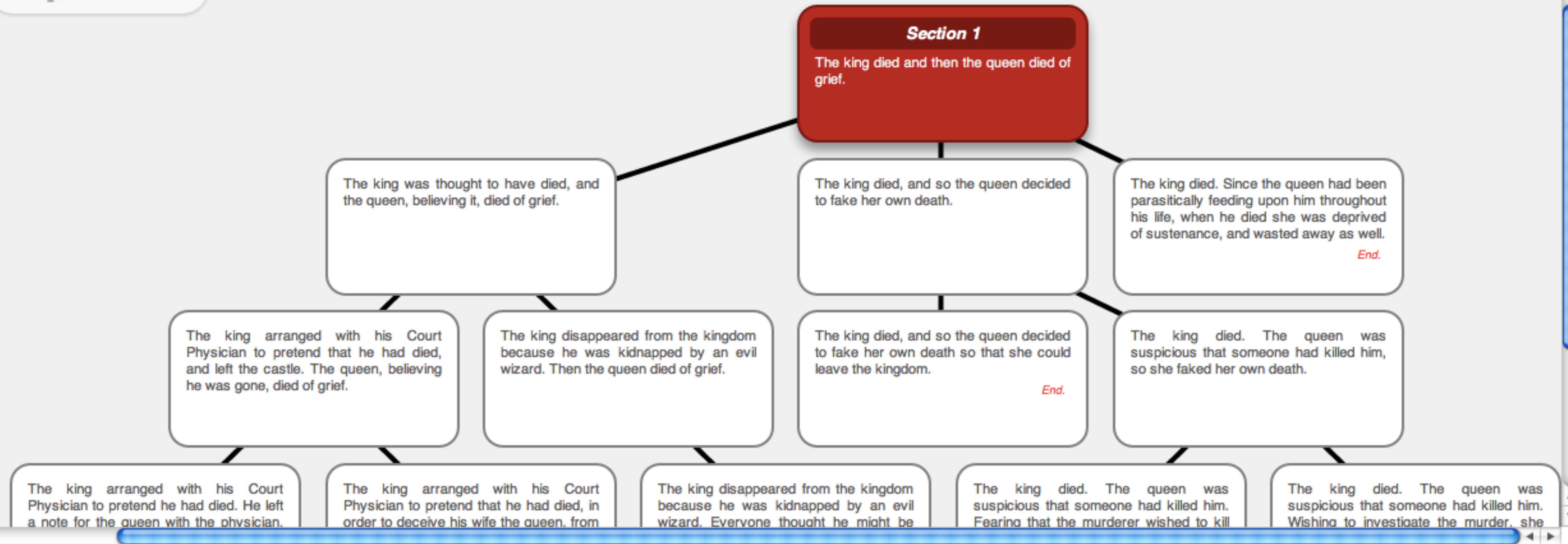
▶ Changing the flow 1 end

▶ Options 1 end

▶ The Contents List



## Map - Section 1





**INK**



## INK: BASICS

```
== par198 ==
```

```
= intro
```

```
~ learn_name_of_cantopani_innkeeper = true
```

```
'I'm a hungry traveller and need to eat.'
```

```
He motions you on ahead. 'You'll find the inn in the centre  
of the village. It's run by Amella. There isn't much there, but  
you'll get something for your belly.'
```

```
* [Thank him] -> thank
```

```
* [Shove him aside] -> shove
```

```
= thank
```

```
'I thank you,' you reply, with a slight bow. He bows in  
reply, but the movement looks awkward on him, like he was a  
performing bear. -> par81
```

```
= shove
```

```
You shove him carelessly aside and he falls into the mud.
```

```
-> par81
```





# CANTOPANI GATE

'I'm a hungry traveller and need to eat.'

He motions you on ahead. 'You'll find the inn in the centre of the village. It's run by Amella. There isn't much there, but you'll get something for your belly.'

*Thank him*

*Shove him aside*





'I'm a hungry traveller and need to eat.'

He motions you on ahead. 'You'll find the inn in the centre of the village. It's run by Amella. There isn't much there, but you'll get something for your belly.'

'I thank you,' you reply, with a slight bow. He bows in reply, but the movement looks awkward on him, like he was a performing bear.



## INK: INLINE LOGIC

**CYCLES:** You {&chew through|munch on} the moss.

You chew through the moss.

You munch on the moss.

You chew through the moss.



## INK: INLINE LOGIC

**CONDITIONALS:** It is much like the last bunch you

`{eatit:ate|{tasteit:tasted|did not dare to taste}}.`

Has visited = `eatit` ? ➔

It is much like the last bunch you ate.

Has visited = `tasteit` ? ➔

It is much like the last bunch you tasted.

Has visited neither? ➔

It is much like the last bunch  
you did not dare to taste.



## INK: APPROACHING PROCEDURAL NARRATIVE

```
{&Laying your pack down|{&{&Setting|Putting} down|{&Removing|Unstrapping}} your pack}  
{on_the_ground()}}, you try to {&settle|stretch out|rest} despite the {drenched:shivering  
cold of your still-wet clothing|{&cold|{landscape == TREES:unsettling noises in the trees|  
wind}}|strange noises that float across the landscape}}.
```

Laying your pack down by the cliff-edge, you try to settle  
despite the cold wind.

Putting down your pack by the roots of a tree,  
you try to stretch out despite the shivering cold of  
your still-wet clothing.



## INK: WEAVE

```
== par198 ==
```

```
~ learn_name_of_cantopani_innkeeper = true
```

```
  'I'm a hungry traveller and need to eat.'
```

```
  He motions you on ahead. 'You'll find the inn in the centre  
of the village. It's run by Amella. There isn't much there, but  
you'll get something for your belly.'
```

```
    * 'I thank you[.'],' you reply, with a slight bow. He  
bows in reply, but the movement looks awkward on him, like he  
was a performing bear.
```

```
    * [Shove him aside] You shove him carelessly aside and he  
falls into the mud.
```

```
- -> par81
```



## INK: WEAVE

\* 'I thank you[. '], ' you reply.

The diagram shows the script `* 'I thank you[. '], ' you reply.` with three numbered choices indicated by curved lines underneath:

- 1 is under `'I thank you[. '`
- 2 is under `], '`
- 3 is under `' you reply.`

Choice (1 & 2):

‘I thank you.’

Game output (1 & 3):

‘I thank you,’ you reply.



## INK: WEAVE IN 80 DAYS

```
== bangalore ==
```

```
- We spent most of our time in Bangalore Cantonment  
rather than the City proper, as it was administered  
directly by the Raj.
```

```
    I had a few hours spare, so
```

```
    * I was happy to pretend I was still in Europe[] if I  
could. {lower(style)}
```

```
-
```

```
    * ... I stayed indoors[] with Monsieur Fogg, tending  
to his needs, while we plotted our departure with haste.
```

```
    -> DONE
```

```
    * ... I took a walk in Meade's Park[], where a group  
of off-duty cavalry officers were playing a game of  
cricket under the shade of peepul trees.
```

```
- "Fancy playing with us?" a young chap with a sparse,  
optimistic moustache called out.
```

```
    * "I don't play cricket."[] I told him
```

```
        ** ...ruefully[].
```

```
        ** ...with a shrug[].
```

```
        -- "/Don't play cricket?/" He looked utterly
```

aghast. "My dear fellow, my dear fellow. How can this be?"

Clearly, he was of that particular mould of Englishman who ordered their life around the cricket-lawn and the fox hunt.

```
        ** "No interest, really[.]", I replied.
```

"No... /interest/?" He repeated my words to himself several times, as if that would somehow alter their meaning. He squinted at me as though he were an Artificer, and I a particularly troublesome automaton. "You are quite serious?"

```
        *** "I do not care for sport."
```

```
        *** "Association football is more my  
style."
```

```
        --- He looked quite ill at my statement.
```

"You Continentals," he said in an odd, strangled tone. "You're even stranger than the natives; at least /they/ like a cricket match, same as any Englishman."

```
        -> end_bangalore
```

```
        ** "I have always wanted to learn[.]", I  
replied.
```

A smile leapt to his face. "Then today is your chance!" He handed me the red-leather cricket ball.



## INK: WEAVE

➡ - "Well, Poitou? Suicide or... murder?"  
\* "Suicide!"  
"Really, Poitou? Are you quite sure?"  
\* \* "Quite sure."  
\* \* "It is perfectly obvious."  
\* "Murder!"  
"And who did it?"  
\* \* "Detective-Inspector Jape!"  
\* \* "Captain Hasty!"  
\* \* "Myself!"  
- - "You must be joking!"  
\* \* "Mon ami, I am deadly serious."  
\* \* "If only..."  
- Mrs. Christine lowered her manuscript a moment.  
The rest of the writing group sat, open-mouthed.

## IN GAME:

"Well, Poitou? Suicide or... murder?"  
"Suicide!"  
"Murder!"



## INK: WEAVE

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Mrs. Christine lowered her manuscript a moment. The rest of the writing group sat, open-mouthed.



## WEAVE: DECLARATIVE FORWARD FLOW

- ▶ Emphasis on content, not flow
- ▶ Great for dialog
- ▶ A “sub-format” of ink

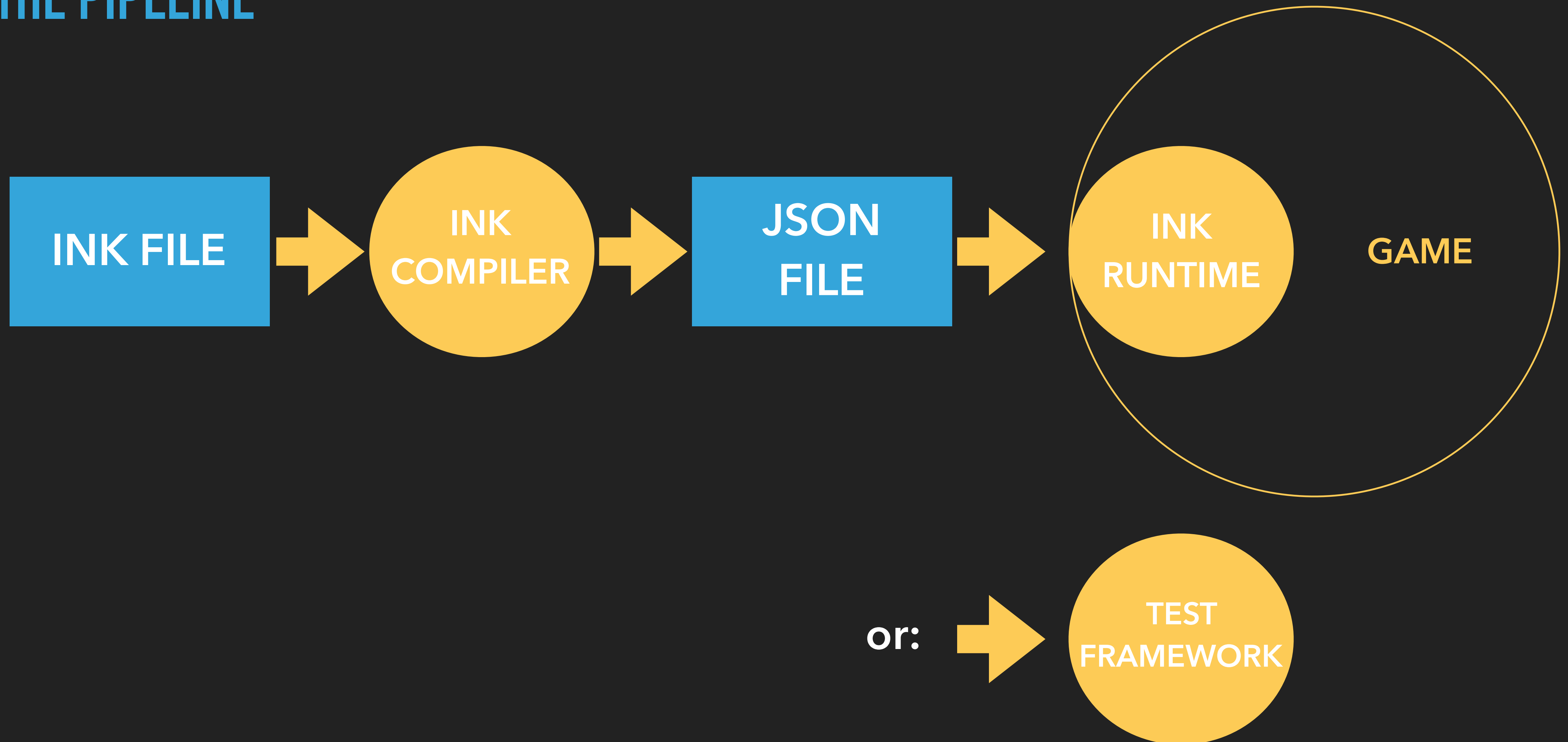


## MOTIVATIONS FOR INK 2

- ▶ More maintainable
- ▶ Future proof
- ▶ Weirdly, I like compilers :-)
- ▶ Open source?



## THE PIPELINE





## INK 2 – “HELLO WORLD” EXAMPLE

Hello world.



## INK: MIXED WEAVE SYNTAX

What's your favourite colour?

\* `Blue[]`, I thought to myself. `-> but`

\* `[Red]` `-> red`

= `red`

Red, I thought angrily.

`-> but`

= `but`

But there was no time to answer.



## COUNTER-INTUITIVE QUIRKS OF INK

- ▶ More markup than programming language
- ▶ We embrace GOTO
- ▶ Punctuation heavy (!?) :-)



## THE SMALL FOOTPRINT

```
using Ink.Runtime;

// 1) Load story
Story story = new Story.CreateWithJson(sourceJsonString);

// 2) Game content, line by line
while(story.canContinue)
    Console.WriteLine(story.Continue());

// 3) Player makes a choice
Console.WriteLine(story.currentChoices[0].choiceText);
story.ChooseChoiceIndex(0);

// 4) Back to 2
...
```



## HOW WE DO DIALOG (WE DON'T)

Anna (shocked): You said WHAT?! #closeup



## INK 2: ADVANCED STRUCTURING

**TUNNELS:**   -> sleep -> dream -> wake ->

**THREADS:**   <- desert\_interactions

                  <- anna\_conversation



## INK: DIFFICULTIES AND DOWNSIDES

# LOCALISATION & AUDIO?

### THE PROBLEMS:

- ▶ Quantity
- ▶ Word-by-word variability



## INK: DIFFICULTIES AND DOWNSIDES

Original ink:

“{Hello|Hi there}, {world|everybody}”

Minimum versions,  
full variability

“Hello, world”

“Hi there, everybody”

Translated versions

“Bonjour, le monde”

“Salut, tout le monde”

Automatically  
re-encode?

(is this even possible  
without errors?)

“{Bonjour|Salut}, {|tout} le monde”



## INK: DIFFICULTIES AND DOWNSIDES

CAN YOU HELP?



**INK IS OPEN SOURCE!**

[www.github.com/inkle/ink](http://www.github.com/inkle/ink)

My email address:

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