Talk slides

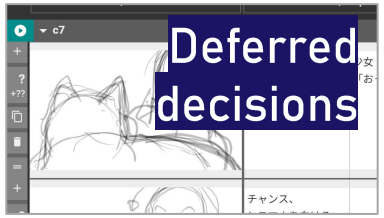
ProConte:

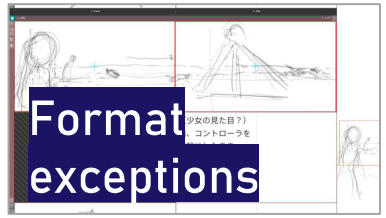
Supporting Progressive Authoring of Anime Storyboards through Partial and Exceptional Representations

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Michel Beaudouin-Lafon*, Wendy E. Mackay*

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In-the-wild collaboration with an anime director: Kazuya Murata

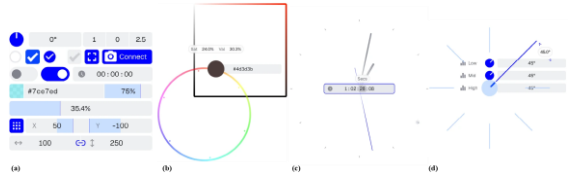
- 33 years of professional experience (storyboarding artist since 1993)
- 10+ years of teaching



His contributions to our research:

- **Co-design** of Griffith [Kato et al., CHI 2024]
- **Production:** a complete storyboard for a 25-min TV episode
- **Process insights** via six two-hour lectures

cf. a visual-artist-led project, **Tweeq** [Hashimoto & Kato, UIST 2025]

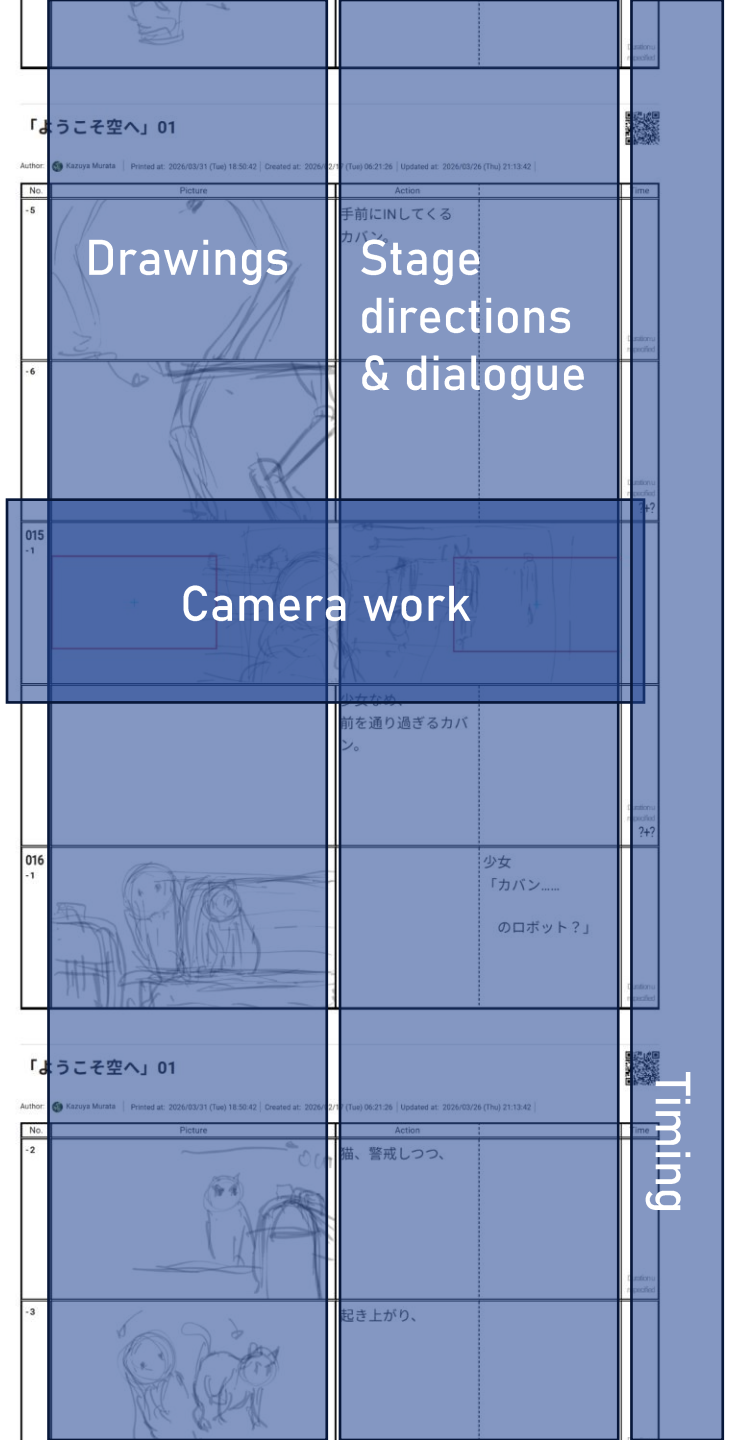


Animāre
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E-conte: a formal production blueprint

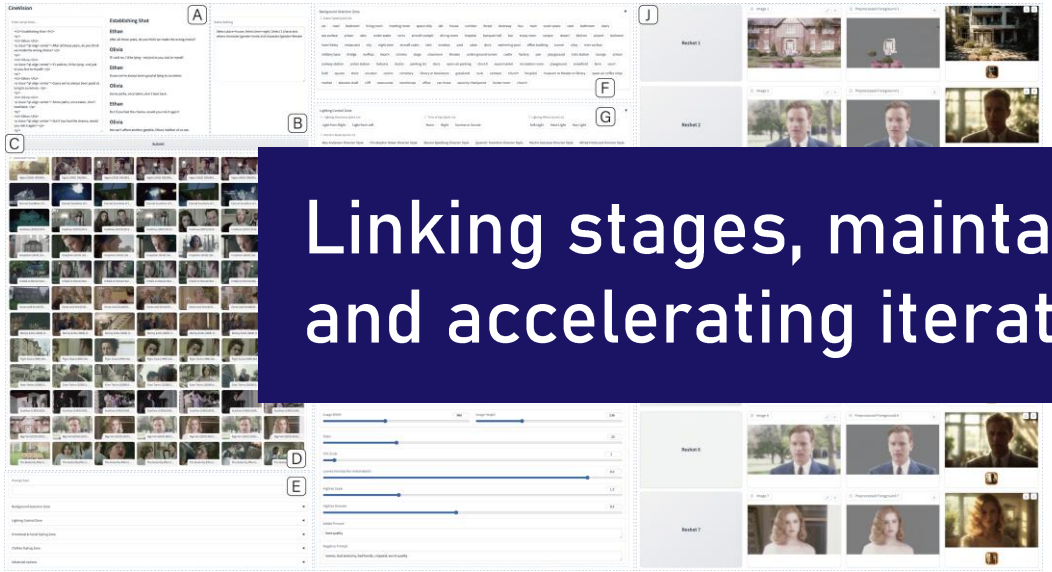
- A standardized storyboard format used in Japanese animation [Kato et al., CHI 2024]
- Specifies drawings, stage directions, dialogue, camera work, **and timing**
- Guides animators and other production specialists

A broader question: how do creators specify what they want to make?

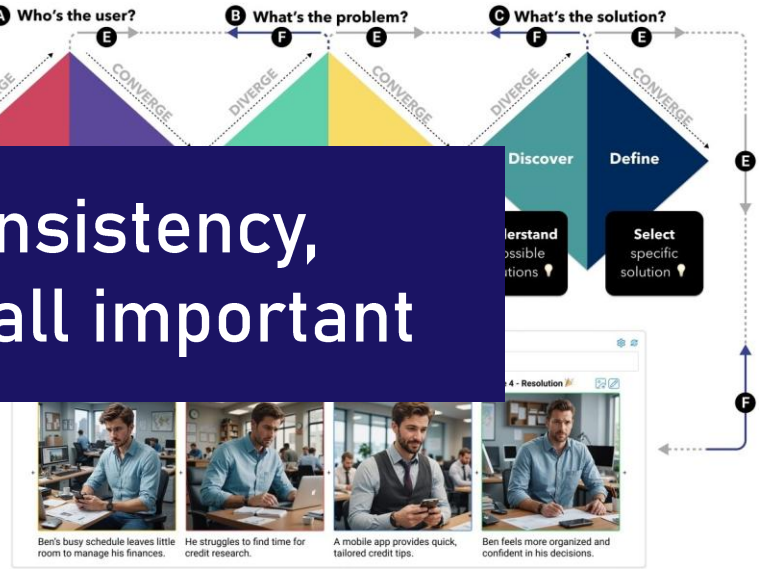


Storyboarding in the AI era

How do creators specify what they want to make?



CineVision [Wei et al., UIST 2025]



StoryEnsemble [Suh et al., UIST 2025]

Linking stages, maintaining consistency, and accelerating iteration are all important

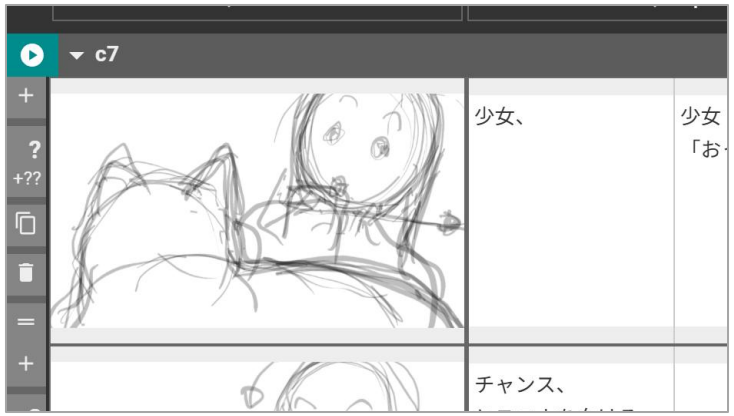
A complementary question: what remains unspecified, until when?

Formal artifact, informal authoring process



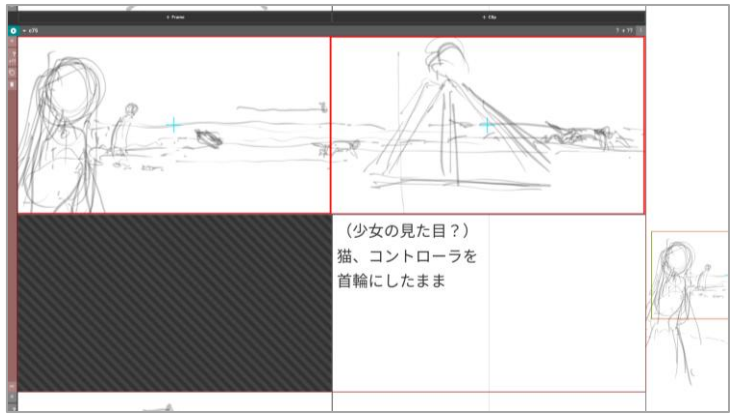
Incomplete entries

Drawings not yet added



Deferred decisions

Timing not yet specified



Format exceptions

Expanded frames

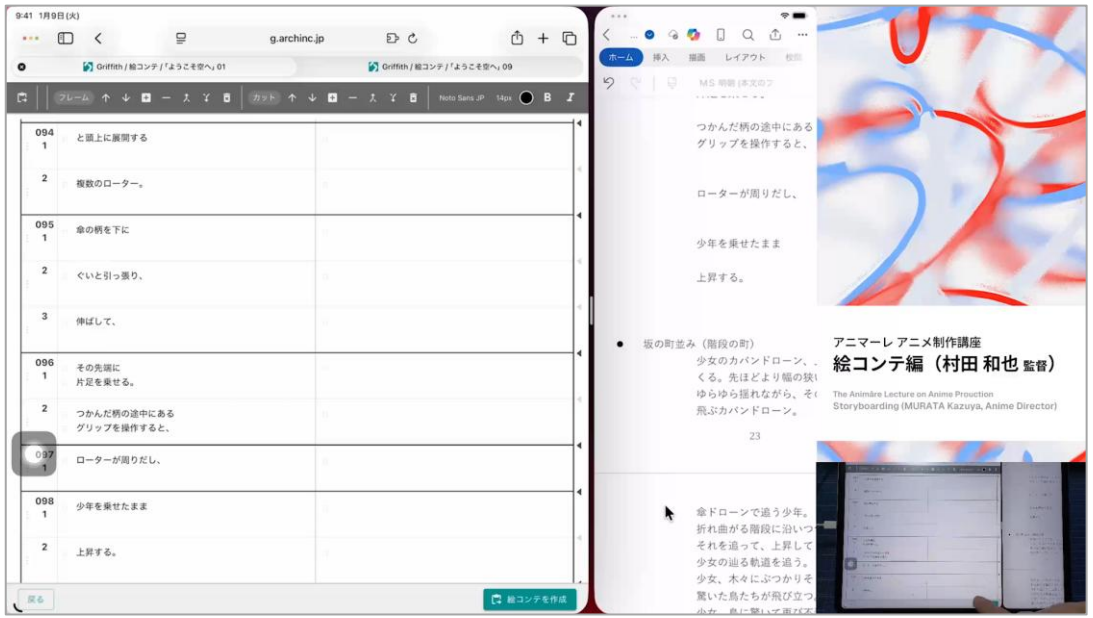
Authoring is not just filling in a template

Authoring workflow (1/3): from script reading to script view



Script reading in an external PDF tool

Already contains rough sketches



ProConte: script view

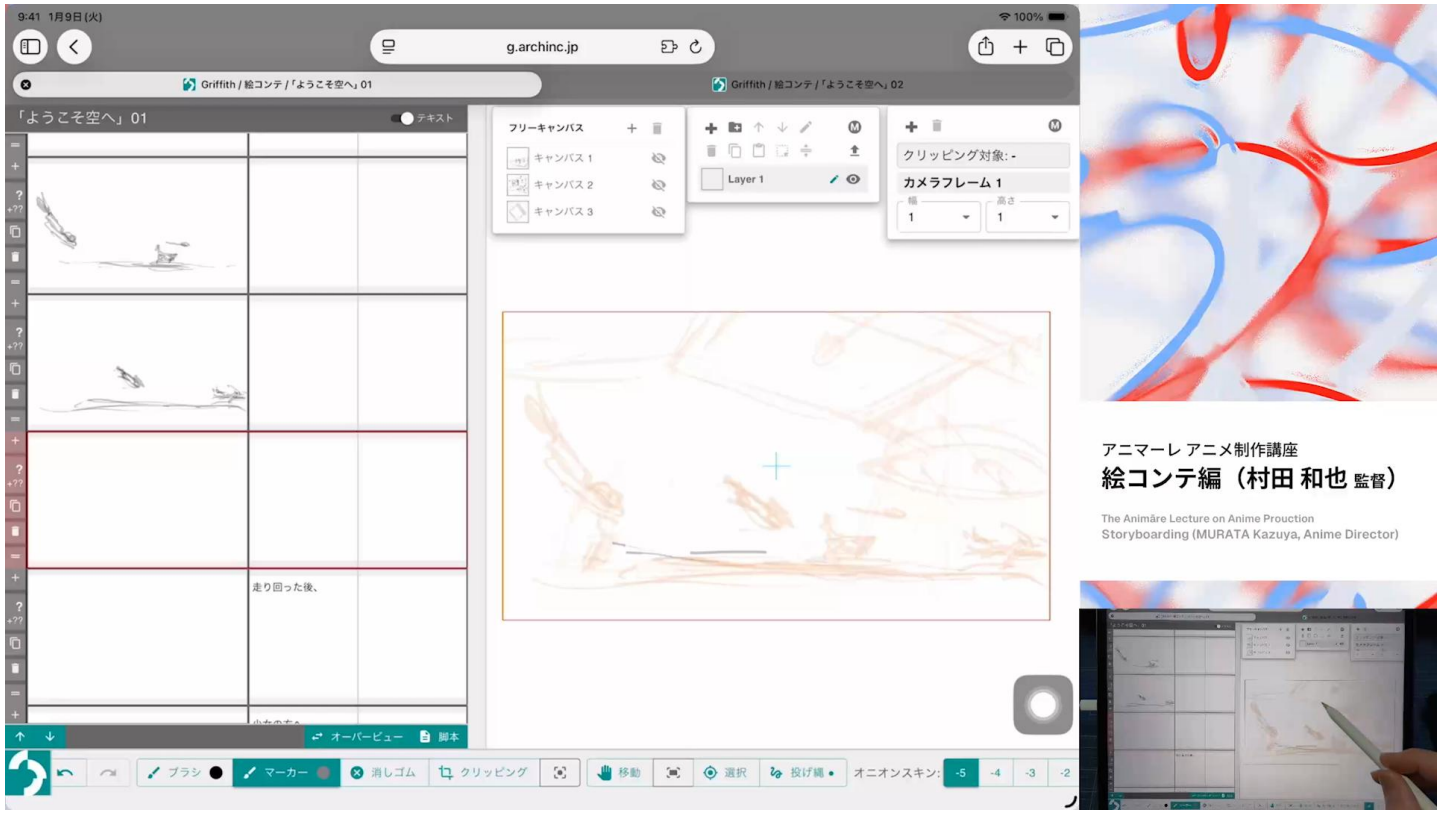
Script text is carried forward
but rough sketches are left behind

Supporting a transition does not mean transferring everything

Authoring workflow (2/3): partialness – working with holes

- Text, drawings, camera work, and timing are progressively specified
- Related concern: design fixation
  [Wadinambiarachchi et al., CHI 2024]

ProConte: main view

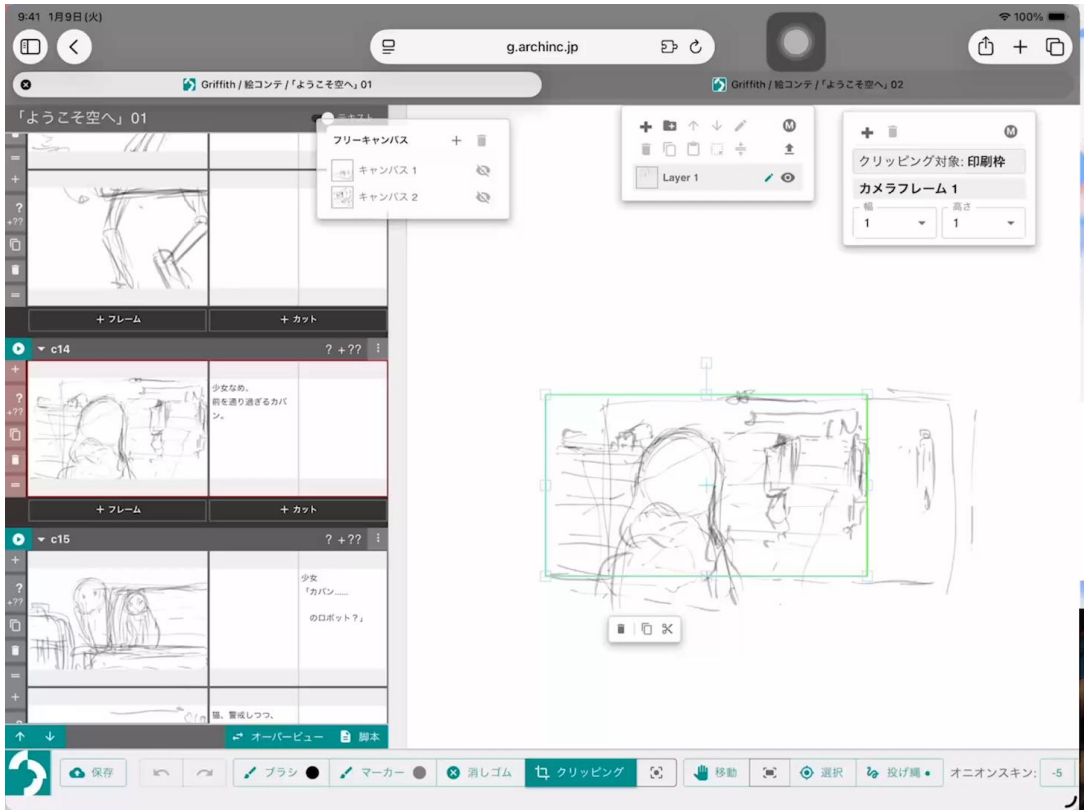


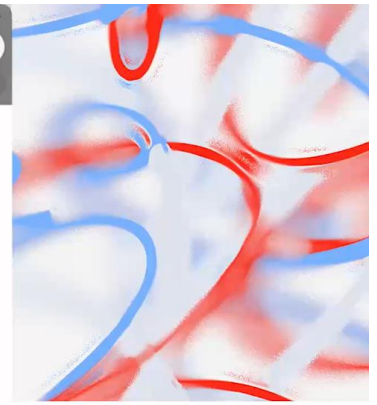
Focus on one layer while leaving others open

Authoring workflow (3/3): exceptions are not errors

- Larger image regions for camera work
- Still compatible with the printed layout
- Related work: EuterPen [Cavez et al., CHI 2025]

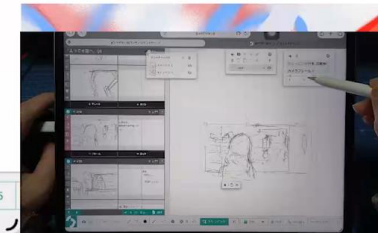
ProConte: main view





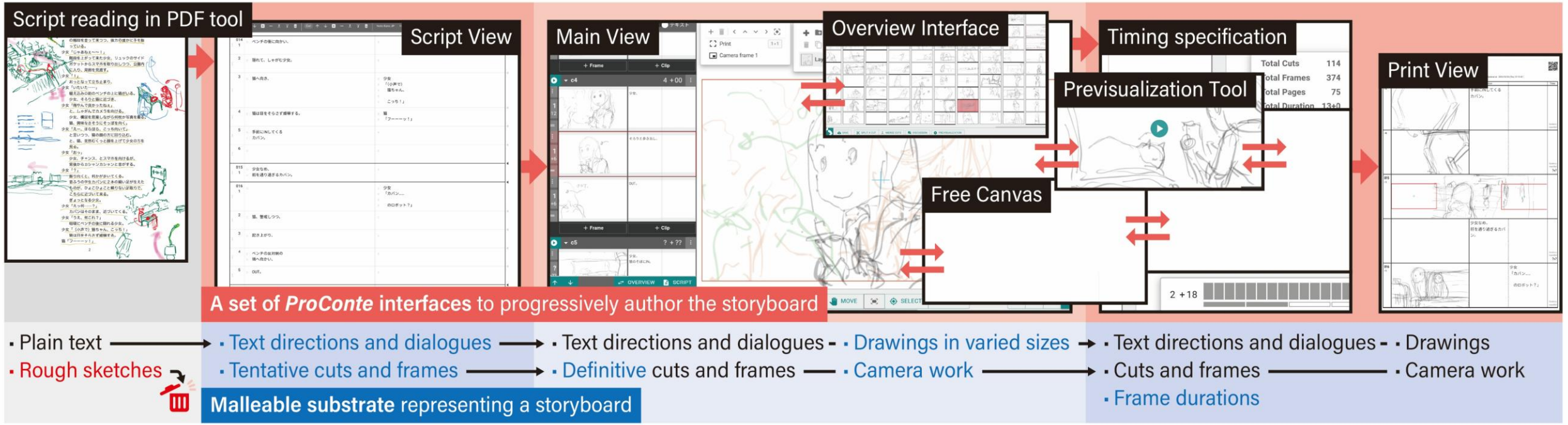
アニマーレ アニメ制作講座
絵コンテ編（村田 和也 監督）

The Animâre Lecture on Anime Prouction
Storyboarding (MURATA Kazuya, Anime Director)



Support useful exceptions without abandoning structure

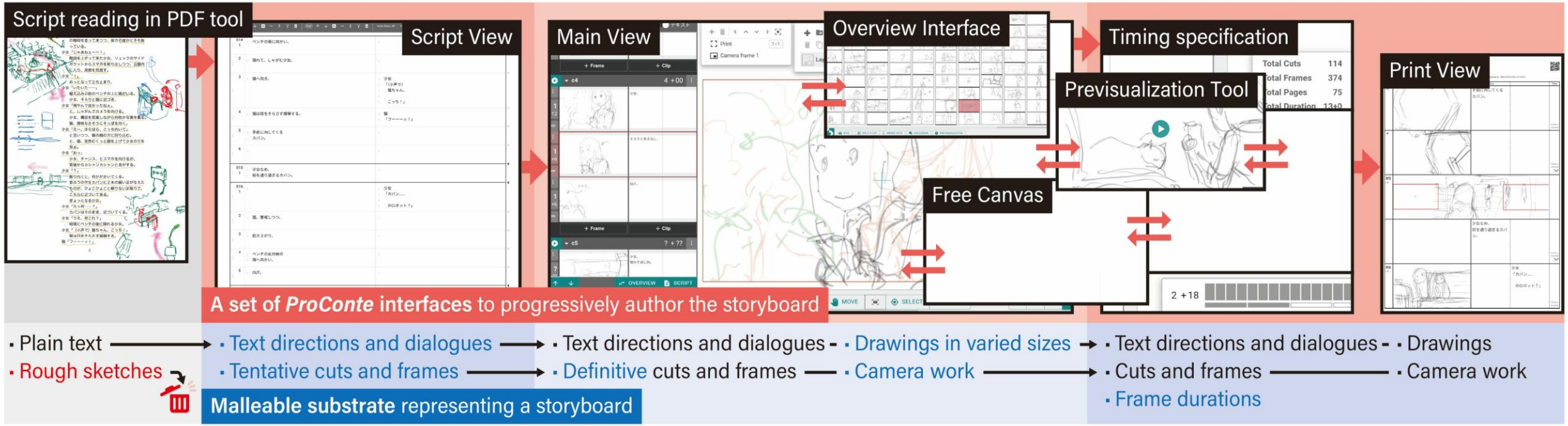
Malleable substrate



building on Interaction Substrates [Mackaya & Beaudouin-Lafon, CHI 2025]

Take-home message (1): support partialness and exceptions in the shared interaction substrate (UI constraints linked to data model)

Progressive authoring



related concept: incremental formalization [Shipman & Marshall, 1999]

Take-home message (2): established workflows can seem restrictive, but their order of commitment may be the secret sauce

From anime practice to HCI contributions

Case-specific observations	Domain-grounded requirements	Broader design lessons
One director's workflow and use of ProConte	E-conte structures and downstream production needs	Malleable substrates and progressive authoring
What he commits, defers, and carries forward	Linked text, drawings, camera work, and timing	Supporting partialness, exceptions, and staged commitment

One domain, one anime director – yet rich lessons for HCI; culturally-grounded HCI is fun!