Explanatory Animation

Motion graphics applied to diagrams, charts and graphs, maps, and technical illustrations

Nancy Wirsig McClure





captured





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created

play examples here

>> Mashup << **Motion Graphics**

Animation (visual change over time)

NOT

cartoons á la Disney, realistic 3D animation, etc.



Infographics

Explanatory diagrams, charts and graphs, maps

NOT

exploratory "data visualization"

Examples How to... or How it Works Change over time Map Morph Abstract relationships Emphasize comparisons Fly-through and peel-away

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Bad examples

Gratuitous animation "Don't waste my time!"

On screen with other content: distracting? "Don't bother me!"

Forced-pace reading

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play examples here

Think: could should we animate?

Animate?

constructions. Fund balance is the comulative reason of the badger document, revenue and expense activity includes boad of a loss of the badger document.

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Eclipse RCP contains a powerful set of core services that makes it easy for developers to create high-level applications. A developer might choose to use Eclipse RCP over a web-browser to develop desktop applications because of the complexity of information to process and display on the

Core services contained in Eclipse RCP include: window manage odate manager, help facility and applications branding. RCP Developer is a comprehensive package of software development life-cycle tools that run in any Eclipse-based Java environment. RCP Developer helps companies design, construct, test and deploy Eclipse ters RCP applications. TTTUSTVATE

The tool also contains Wizards that can be used to generate RC. Preference pages I bins the Boot Preference pages. Using the Preferences Editor, developers can create preference pages to control the behavior of the RCP application. Using these features lets the developer automate many timeconsuming tasks.

any future

future o

CVie.

Consider context:

• Stand-alone system? • Stand-up presentation?

convox in the case of proprietary funds, this is termed unrestricted net access to the budget document, revenue and expense activity includes boad net access new thinking cap

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Pacing

User control?

Technology: Delivery

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File formatFile formatoptionsselection criteria

Flash

Video

Animated GIF

File size concerns? Mostly history.

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Shareable online?

Technology: Development tools

Graphics



Images



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Audio Any

Video Production



Authoring Phases; Phase 1



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Thinking about your topic Thoughts on Thoughts on animation visuals The 4th Analysis/synthesis dimension (time) How pictorial? Tufte's "chart junk"

Match existing styles?

Both: what story are you telling?

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Principles of traditional animation

Motion style

Storyboard



sequential words & pictures



VOICE (Droplet): I was formed NN-thousand years

ACTION: Zoom in (sort of) from previous. Pump

SOUND: Rhythmic sucking of pumps

and I'v e been sitting NN miles beheat the deser

SOUND: Yacht engine. ACTION: Both vessels travel horizontally, but at different speeds. Droplet swivels a bit.

SOUND: Some kind of tick sounds for dots appearing

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VOICE (Droplet): It all starts in the Middle East. ACTION: Planet rotates.



VOICE (Narrator): The Middle East as whole produces 25,459,700 Barrels of Oil a day. SOUND: Wind sound, slow build ACTION: Zoom in from previous



VOICE (Narrator): A barrel of oil can make 42 gallon of gas. SOUND: Wind sound continues ACTION: Zoom in from previous

VOICE (Narrator): The cost of finding and extracting the oil gives a baseline cost of \$2.07 per gallon of gas SOUND: Rhythmic sucking of pumps. Ka-ching for

Actions, the second sec



VOICE (Droplet): [about travel through pipeline from oil wells to the sea SOUND: "Rushing liquid."

ACTION: Droplet appears, in from left, and surfs across horizontally. He and his board rock a bit.



VOICE (Droplet): [about travel from pipeline to my VOICE (Narrator): [about the breakdown shown] SOUND: Whoosh (for drops), then kerplunk at end. ACTION: Drops appear out of faucet, falls off bottom





 VOICE (Droplet): Ship ahoy!
 VOICE (Droplet): We have to travel south, around the Cape of Africa, to get to the Atlantic Ocean.
 VOICE (Droplet): We cross the Atlantic Ocean.

 Voice (Narrator): Each ULCC is 320,000 deadweight tons and holds over 2 million barrels of oil.
 VOICE (Droplet): We rows the Atlantic Ocean.
 Destination: Texas.

 VOICE (Narrator): Travel path "grows". Droplet waves flags.
 VOICE (Narrator): Transportation costs add 2 or 3
Destination: Texas. VOICE (Narrator): Transportation costs add 2 or 3 cents per gallon. ACTION: Planet rotates to new view. Travel path "grows." Droplet waves flags. SOUND: Same ticks. Ka-ching for data appearing.



VOICE (Droplet): At the refinery on the Gulf coast, [describe refining]. ACTION: Smoke moves in wind. Droplet walks on ACTION: Smoke moves in wind. Droplet walks on ACTION: Smoke moves in wind. Droplet walks on treadmill, black "sweat drops" fly off, and he gradually changes to translucent greenish color



Authoring: Phases 2–3



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PRODUCE "THE SHOW"









Sketches to final art

VOICE (Droplet): It all starts in the Middle East. **ACTION:** Planet rotates. 03



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Authoring: Phase 4



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"Let's put on a show!"

What goes where? when? Who is offstage at this moment?

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After Effects

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MARKER

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Visual change over time **Apply effects** Change an object Blur, sharpen, texture Position, scale & rotation Basic color Distort Layering (stacking order, Mask (reveal portions) opacity & blending) Swap out objects to "morph"

Authoring: Phase 5 Animation is *especially* likely to fail to communicate.



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Authoring: Phase N+1: Iterate?

Do we want to spend more time and money?! Careful storyboarding may prevent revisions.



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Explanatory Animation

Worth it?

Research-based evidence: it results in better...

engagement comprehension retention



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contact Nancy OR find

resources