Content Systems Architecture

Approaches in a decoupled world

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February 6th 2019
Software architecture must evolve towards systems thinking in order to meet the needs of emergent content systems.
Content systems consist of cohesive yet distinct entities that are interrelated and interdependent, forming a whole which has a structure and purpose that defines its boundary."
Definition

“**Systems thinking** is the fuzzy area of understanding the boundaries that distinguish one system from other systems and defining what interrelated and interdependent mean within those boundaries.”
“The ecosystem in which the content shares branding and editorial oversight and the entities communicate, rely on and/or react to each other somehow.”
Definitions

“Emergent means greater than the sum of its parts because it depends not on individual elements but on the structure of relationships between them.”
Journalism That Stands Apart

THE REPORT OF THE 2020 GROUP
JANUARY 2017

This report, by a team of seven Times journalists, outlines the newsroom’s strategy and aspirations. For additional details, see this memo from Dean Baquet, The Times’s executive editor, and Joe Kahn, the managing editor.

This is a vital moment in the life of The New York Times. Journalists across the organization are hungry to make change a reality, and we have new leaders ready to push us forward. Most important, The Times is uniquely well positioned to take advantage of today’s changing media landscape — but also vulnerable to decline if we do not transform ourselves quickly.

While the past two years have been a time of significant innovation, the pace must accelerate. Too often, digital progress has been accomplished through workarounds; now we must tear apart the barriers. We must
Emergent content system

- Visual
- Ecosystem
- Success criteria

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TL;DR

• Make discussions transparent
• Partner with subject matter experts
• Define words
Teams that cultivate emergent behavior build emergent systems
Architect as system integrator

Vladgrin, Bigstock.com
You are the expert at integrating everything
Thanksgiving with the architect
Architects create conceptual integrity by structuring argumentation
Top Down Elaboration (TDE)

- Summary
- Why
- What
- Who
- How
- When

By Aleksandr Andrushkiv, Shutterstock.com
Why

By Aleksandr Andrushkiv, Shutterstock.com
What
Who
How
When
Architects tell stories (about what is and what could be) by structuring the point of view
CACHING

security

search

AWS services

testing

WYSIWYG

GraphQl

semantic tagging

responsive images

microservices

scaling

content architecture

QA

continuous deployment

3rd party integrations

performance

redundancy

UX and design

infrastructure

version control

versioning

Code repositories
Task analysis

Observe what people do and understand why they do it.
Plan 0
1. 2 then 3
Unless early draft
4.2.1 may precede 3

1. Assignment
   - Email
   - Weekly schedule sheet
   - Google doc
   - CCI
   - Slack
   - Discussion
   - Other comm method

2. Write
   - Word
   - Google doc
   - CCI
   - Other editor

3. Submit
   - Paste into email
   - Attach Word doc
   - Share Google doc
   - Assign in CCI
   - Other editor

Plan 4
4.x are simultaneous
4.2.1 throughout

4. Edit
   is anyone editing outside of CCI first?

4.1. Add Notes
   Options
   - Insert text like [NOTE THIS]
   - Insert text in caps with "--" (if necessary)
   - Other notation
   Options
   - Insert nonPrintable text in CCI
   - and/or Paste original in notes at bottom

4.2. Add Deletions
   Options
   - Paste whole into email w/o deletions
   - Paste whole into email w/ deletions
   - Summarize in email
   - Slack
   - Phone call or in person
   - Attach Word doc
   - Share Google doc
   - Assign in CCI

4.3. Fit on page
   Options
   - Once in layout, press F5 to see columns and line breaks
   - Face to face with designer

Plan 3.1
Editor’s discretion before 4.3

3.1 Paste into CCI

4.2.1 Communicate Re: Edits
   Options
   is anyone using google docs - would that make sense?

Still F5?
<table>
<thead>
<tr>
<th>User</th>
<th>Author: writes an article</th>
<th>Preview</th>
<th>Editor: edits and fits an article</th>
<th>Versioning</th>
<th>Deputy: proofs a section or entire edition</th>
<th>Web editor: publishes to the web (becomes obsolete?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>Text</td>
<td>Images</td>
<td>Other media</td>
<td>Views</td>
<td>Moving/approval</td>
<td>Publishing</td>
</tr>
<tr>
<td>Login</td>
<td>Write article including headline, dateline, byline, date, body copy (ADD)</td>
<td>Associate existing image</td>
<td>Add associated audio</td>
<td>Editing view</td>
<td>Move to different queue (editor change workflow state)</td>
<td>Publish / unpublish to [select channel]</td>
</tr>
<tr>
<td>Logout</td>
<td>Autosave</td>
<td>Mark one image as promo image</td>
<td>Add associated video</td>
<td>Preview to match section template</td>
<td>Approve - move (system changes workflow state)</td>
<td>Create channel specific version</td>
</tr>
<tr>
<td>Access article edit form</td>
<td>Error checking (required fields for example)</td>
<td>Accompanying images to the body content</td>
<td>Upload video</td>
<td>Writing view</td>
<td>Editing process: Add questions and editorial edits</td>
<td>Replacing or refreshing image without reassociating</td>
</tr>
<tr>
<td>Share with limited internal group</td>
<td>Fit to length (character count?) for elements of the article</td>
<td>Add interactivity</td>
<td>Upload audio</td>
<td>Preview to match channel i.e. print or web or app etc.</td>
<td>Reply to edits</td>
<td>Tag article to relate to sections or associated collections(?)</td>
</tr>
<tr>
<td>Configure access levels</td>
<td>Save - user activated</td>
<td>Add image captions</td>
<td>Preview images while editing text (bigger than a thumbnail)</td>
<td>Notification of workflow state change</td>
<td>Self set publish time</td>
<td>Compare versions</td>
</tr>
</tbody>
</table>
Therefore,

Software architecture must evolve towards systems thinking in order to meet the needs of emergent content systems

• Model and reinforce emergent behavior (interdependency and interrelating)

• Create conceptual integrity by structuring argumentation

• Tell stories about what is and what could be from multiple points of view
Equifinality
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