Evolution to Drupal 8

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ATLAS Public Web Site

http://atlas.cern

Public access to

- Descriptions of Experiment
- Educational Resources
- Updates (News, Briefings, Blog, etc.)

In Drupal since March, 2016

- Replaced original html site
- Developed in Drupal 7
- Maintained by ATLAS Communication Team
Spikes correspond to publications, events

Steady growth over 3+ years (now around 30k views/week)
Migration to Drupal 8

Motivation

• Drupal is an Open Source Content Management System (CMS)
  • Selected for security, management of large sites
• CERN supports Drupal 7 until mid-2020
  • CERN guarantees support for Drupal 8
• Opportunity to Improve ATLAS Public Site
  • More dynamic look & feel
  • Better, automatic portability between screen sizes

Technicalities

• Migration not automatic
  • Change of template language from php to twig
  • Original ATLAS designers used short codes in ATLAS theme
• Opportunity to improve maintainability
  • Decrease ATLAS-specific code
  • Simplify future migrations
Extracts from Collaboration Poll

What are your areas of work in the collaboration? (check all that apply)

Answered: 37  Skipped: 0
Extracts from Collaboration Poll

Why do you visit the ATLAS Public Web Site? (check all that apply)

Answered: 36  Skipped: 1

- To read the latest ATLAS...
- To read the Physics...
- To read the ATLAS blog
- To find educational...
- To find images, even...
- To book visits and virtual...
- To look for jobs
- Other (please specify)

Survey results with percentage bars.
How would you prioritise the audiences of the ATLAS Public Web Site?

Answered: 36   Skipped: 1

- Primary School Students (age...
- Secondary School Students
- University Students
- Teachers
- General Public
- Policy Makers
- Other Scientists
Extracts from Collaboration Poll

How much of the following content do you expect on the ATLAS Public Web Site?

Answered: 34  Skipped: 3

- Descriptions of the...
- Descriptions of the...
- Descriptions of the Phys...
- Educational Material
- Multimedia Material
- News, Profiles...
- Physics Briefings
- Blog Posts
- Press Statements

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- There is too much of this
- The amount is just right
- I'd like to see more of this
Extracts from Public Poll

Who are you?

Answered: 36  Skipped: 0
Extracts from Public Poll

How often do you visit the ATLAS Public Website?

Answered: 35    Skipped: 1
Extracts from Public Poll

Why do you visit the ATLAS Public Website?

Answered: 36    Skipped: 0

- To read the latest ATLAS...
- To learn about the ATLAS...
- To find educational...
- To find images and videos...
- To learn about particle...
- To book a visit or...
- Other (please specify)
Extracts from Public Poll

How do you access the ATLAS Public Website? (check all that apply)

Answered: 36   Skipped: 0

- Desktop
- Laptop
- Tablet
- Phone
- Other (please specify)
What areas of the ATLAS Public Website do you typically visit? (check all that apply)

Answered: 36   Skipped: 0

- Front Page
- Discover Pages (About,...)
- Resource Pages (Multimedia,...)
- Updates (News, Briefings,...)
- Other (please specify)
Quick Summary of Poll Input

The Collaboration
• Comes to public site for Material, News
• Expect a broad range of audiences
• Want more educational material

The Public
• Identify as General Public, University Students, Scientists
• Visit fairly frequently
• Want the latest News and to learn about ATLAS & Particle Physics
• Uses a variety of screens

In General
• Statistics limited, but matches data from polls of 4 years ago
• Our structure (Description, Educational Material, Updates) remains valid
Migration Wish List

Upgrade Infrastructure

- Rebuild ATLAS site in Drupal 8
  - Content Types, Views, Blocks, Style, Tools, Content
- Use “CERN Override” theme instead of “ATLAS” theme
  - Remove specialised templates

Improve Design

- Follow current trends
  - Dynamic, responsive content (all screen sizes)
  - More scrolling, easy to use menus, no hovering
- Better usability for content developers
  - Easier Layout Capability

Automated Large-Scale Migration of Content
The Challenge

Content Types

• **Current**: Glossary Term (22), Home Page (2), Job Posting (400+), Multimedia Page (1), Page (40), Update (400+), Webform (2)

• **Drupal 8**: Glossary Term, Home Page, Job Posting, Landing Page, Update Virtual Visit, Webform

Views

• **Current**: Author Profiles, Updates, Blog, Briefings, Features, News, Portraits, Profiles, Press Statements, Updates Side Bars, All Updates pages, RSS Feeds, Glossary, Jobs, Discover, Resources pages

• **Drupal 8**: Author Profiles, Updates, Blog, Briefings, Features, News, Portraits, Profiles, Press Statements, Glossary, Jobs, Virtual Visits

Totals

• More than **1000 pages of content** and a few dozen new landing pages and views
Where Are We, Now?

Design

• ATLAS Visual Identity Implemented in CERN Override
  • Colour Palette, Logo, Favicon, Fonts (no, not comic sans, but open sans)
  • Regions & Blocks Similar to Drupal 7 site
    • Forced to redefine footer, but not an issue

Content Types

• Using Landing Page as is, others redefined, as in Drupal 7
  • Being tested and refined (77 nodes, so far)

Views

• Re-defined as in Drupal 7
  • Being tested and refined
ATLAS is...
an experiment at CERN designed to explore the secrets of the universe.

LATEST NEWS

Highlights from Moriond
News | 23rd March 2019

Preparing ATLAS for the future
News | 20th December 2018

ATLAS completes data-taking
News | 3rd December 2018

DISCOVER THE ATLAS EXPERIMENT

Work in progress...
One of the four major experiments at the LHC

ATLAS is one of the four major experiments at the Large Hadron Collider (LHC) at CERN. It is a general-purpose particle physics experiment run by an international collaboration and, together with CMS, is designed to exploit the full discovery potential and the huge range of physics opportunities that the LHC provides.

Push the frontiers of knowledge

ATLAS scientific exploration uses precision measurements to push the frontiers of knowledge by seeking answers to fundamental questions such as: What are the basic building blocks of matter? What are the fundamental forces of nature? Could there be a greater underlying symmetry to our universe?

Test the predictions of the Standard Model

ATLAS physicists test the predictions of the Standard Model, which encapsulates our current understanding of the building blocks of matter and how they interact. These studies can lead to ground-breaking discoveries, such as that of the Higgs boson, physics beyond the Standard Model and the development of new theories to better describe our universe.

The years ahead will be exciting

The years ahead will be exciting as ATLAS takes experimental physics into unexplored territories...
THE ATLAS DETECTOR

The largest volume detector ever constructed for a particle collider

ATLAS has the dimensions of a cylinder, 49m long, 23m in diameter, and sits in a cavity 110m below ground. The ATLAS detector weighs 7,000 tonnes, similar to the weight of the Eiffel Tower.

The detector itself is a many-layered instrument designed to detect some of the slickest and most energetic particles ever.
What Remains

Development
• Completion of Landing Pages for Physics, Resources, etc.
  • Adjusting style of cards and other elements
• Completion of Example Updates pages with quality layout
  • Simplification of interface for writer

Content
• Automatic porting of high-quantity Content Types
  • Updates, Job Postings, Virtual Visits
• Refinement of the automatically ported content

Design
• Modification of elements, like cards, to our own ATLAS style (see images of home page, e.g.)
Development Issues

Landing Pages
• Flexible, but not trivial for writer to work with
• For example, lack of clone feature for elements is a show-slower

Updates (News, Briefings, etc.)
• Article Content Type insufficient for creating quality content visually
  • Editing source to add Bootstrap classes by hand!
• We need to be able to lay out an article professionally
  • My writer keeps begging me for WordPress
  • Hasn’t anyone come up with a similar environment for Drupal? Why not?

Short Codes
• In Drupal 7, we defined short codes, like [img right 50%] or [span1of3]
• Perhaps this can be handled in the WYSIWYG?
physicists to measure kinematic properties of the Higgs boson with unprecedented precision (Figure 3). These are sensitive to new physics processes, making their exploration of particular interest to the collaboration.

Figure 2: Distribution of the invariant mass of the two photons in the ATLAS measurement of $H\rightarrow\gamma\gamma$ using the full Run-2 dataset. The Higgs boson corresponds to the excess of events observed at 125 GeV with respect to the non-resonant background (dashed line). (Image: ATLAS Collaboration/CERN)

Figure 3: Differential cross section for the transverse momentum ($p_T, H$) of the Higgs boson from the two individual channels ($H\rightarrow ZZ^*\rightarrow 4\ell$, $H\rightarrow\gamma\gamma$) and their combination. (Image: ATLAS Collaboration/CERN)
Layout two images side-by-side (Drupal 8 CERN theme)

<figure class="cds-image" id="ATLAS-PHOTO-2018-020-2"><a href="//cds.cern.ch/images/ATLAS-PHOTO-2018-020-2" title="View on CDS"><img alt="Plots or Distributions, Physics, ATLAS, Higgs boson" src="//cds.cern.ch/images/ATLAS-PHOTO-2018-020-2/file?size=large" /></a><figcaption>Figure 3: A recent distribution of candidate Higgs events from the H to ZZ to 4 leptons analysis using 13 TeV data from the LHC. The excess of events around 125 GeV is consistent with Standard Model predictions for the Higgs boson. (Image: ATLAS Collaboration/CERN)</figcaption></figure>

<figure class="cds-image" id="ATLAS-PHOTO-2018-020-1"><a href="//cds.cern.ch/images/ATLAS-PHOTO-2018-020-1" title="View on CDS"><img alt="Plots or Distributions, Physics, ATLAS, Higgs boson" src="//cds.cern.ch/images/ATLAS-PHOTO-2018-020-1/file?size=large" /></a><figcaption>Figure 4: The measured interaction strength as a function of the mass of different particles in the Standard Model. (Image: ATLAS and CMS Collaborations/CERN)</figcaption></figure>
Large-Scale Porting of Data

Updates
• There are 400-500 articles that need to be ported
• They contain short codes for the layout
  • They will need to be translated manually or automatically

Job Postings
• There are 400-500 postings that need to be ported
  • We maintain an archive of past postings
• Should be straightforward

Virtual Visits
• There are around 400 visits that need to be ported
  • They are in a different Drupal 7 site
Summary

Move to Drupal 8

• We are trying to comply with the choice of Drupal 8 for upgrade
  • The CERN support team is very helpful
  • CERN Override Theme provides most of the functionality we need
• The theme (perhaps Drupal, in general) is frustrating for high-level design
  • The environment for content providers (writers) is clunky
  • We are having to develop code (templates) to implement our style
• We do not yet know how the mass import (>1000 nodes) will go

Common Goals, Different Approaches

• CMS, ALICE seeking developer
• IPPOG using designer / first implementation (we will port data)
• Don’t we all (including CERN) have same needs for publishing articles?