

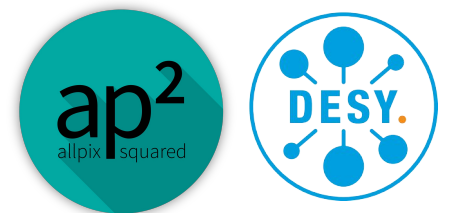
Allpix Squared Website & Documentation

Overview and updates since last year

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4th Allpix Squared User Workshop

HELMHOLTZ



Motivation

Using Markdown everywhere

- About 1.5 years ago, it was decided the website needs a makeover
- Documentation was in LaTeX, which did not render nicely to HTML
- Markdown was chosen as a format
- Ended up using hugo, a fast static website generator that natively uses Markdown
 - Hugo requires a theme, we chose Docsy
- More details in the talk from last year's workshop
- New website finally launched with release of version 3.0.0 on allpix-squared.docs.cern.ch

New Website

Things you can do now

- Ponder over equations that now render correctly on the website
- Enjoy an online documentation that never has been prettier before
- Read about the latest Allpix Squared news or check the documentation on your phone
- Copy nicely highlighted code blocks with a single button
- Use the site-wide search function
- Quickly navigate chapter, sections and subsection with navigation bars on the left and right side
- Read the documentation directly in GitLab/GitHub
- Continue using the PDF documentation

Allpix Squared
website commercial

New Features

Updates since last year

- Automatic deployment via GitLab Pages
- Updated design for front-page, news section and other sub-pages
- Improved display width on wide screens and mobile phones
- Artifacts from converting from Markdown to PDF fixed
- Directly copy code blocks on the website
- Doxygen API reference available on the same website
- Improved some sections of the manual and added documentation of objects
- RSS for news

Live Demo

Test your documentation changes in real time

The real website: allpix-squared.docs.cern.ch

However, let's build it from scratch:

```
# install hugo, here e.g. Ubuntu
```

```
sudo apt install hugo
```

```
# clone website
```

```
git clone https://gitlab.cern.ch/allpix-squared/allpix-squared-website.git
```

```
cd allpix-squared-website
```

```
# fetch artifacts from allpix-squared repository and run hugo
```

```
./get_artifacts.sh job <ci_job_nummer>
```

```
hugo server
```

Live Demo

Testing Testing Testing

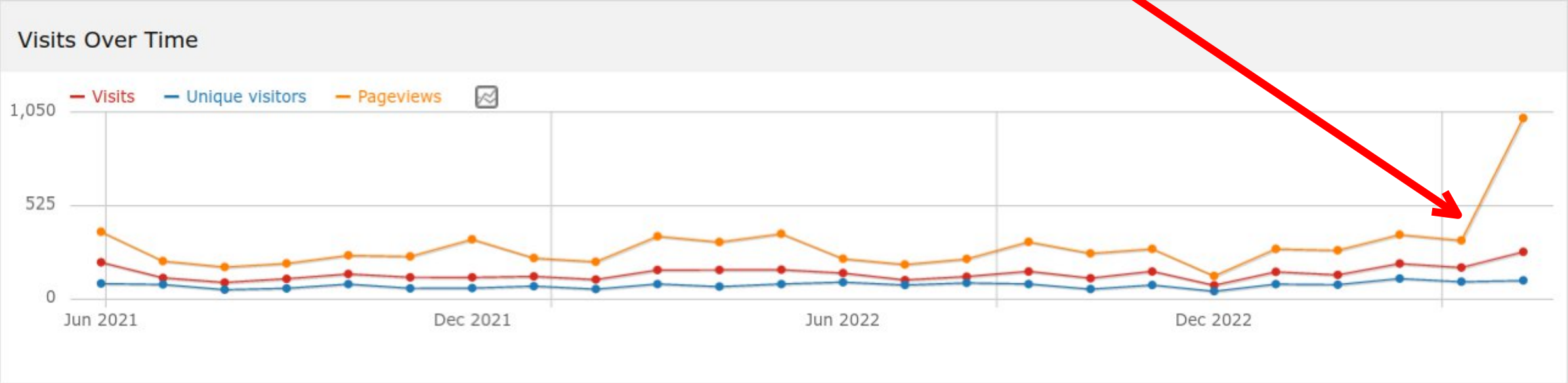
... and contributing

- Testing how a website / PDF ends up looking is quite difficult to do via CI
- But as you can see, testing your own documentation changes is easy!
- Documentation on how to write a module documentation:
[doc/README.md on gitlab.cern.ch/allpix-squared/allpix-squared](https://gitlab.cern.ch/allpix-squared/allpix-squared/doc/README.md)
- PDF also produced by CI, just download the artifact from the docs:usermanual-pdf CI job

Page Visits

Looks like users already started using it

New website launched



Upcoming Features

Module maintainers, status, input and output objects

Allpix Squared

News Publications Documentation FAQ API Community Search this site...

Search this site...

Documentation

Introduction
Installation
Getting Started
Structure of the Framework
Geometry and Detectors
Physics Models & Materials
Objects
Modules

- CapacitiveTransfer
- CorryvreckanWriter
- CSADigitizer**
- DatabaseWriter
- DefaultDigitizer
- DepositionCosmics
- DepositionGeant4
- DepositionGenerator
- DepositionLaser
- DepositionPointCharge

Documentation / Modules / CSADigitizer

CSADigitizer

Digitizer emulating a Charge Sensitive Amplifier

Maintainers	Annika Vauth (annika.vauth@desy.de) Simon Spannagel (simon.spannagel@desy.de)
Status	Functional
Input Object	PixelCharge
Output Object	PixelHit

Description

Digitization module which translates the collected charges into a digitized signal, emulating a charge sensitive amplifier with Krummenacher feedback. For this purpose, a transfer function for a CSA with Krummenacher feedback is taken from [[@kleczek](#)]:

$$H(s) = \frac{R_f}{(1 + \tau_f s) * (1 + \tau_r s)},$$

[Ask question](#)
[Create project issue](#)
[Create website issue](#)

Description
Parameters
Parameters for the simplified model
Parameters for the CSA model
Parameters for the custom model
Plotting parameters
Usage

Upcoming Features

Different versions also on the website

- Documentation of old Allpix Squared versions down to v0.2 available as PDF on project-allpix-squared.web.cern.ch/usermanual
- Documentation of master branch also available as PDF there
- Website currently only features documentation of latest stable version
- Would be nice to have online documentation for older versions (starting from v3.0) as well
- In principle supported by Docsy, but not trivial
 - Reason: permanent storage required (not really possible with GitLab pages)

Lessons Learned

Building a good-looking website with documentation is harder than it sounds

- Whatever you do, you probably want Markdown
 - Easy to read without rendering, and JIT rendering native on GitLab/GitHub
 - Code highlighting is excellent almost everywhere
 - Things like LaTeX formulae, Mermaid or PlantUML diagrams are widely supported
- Choose the tool best suited for your use-case
 - Mostly API reference? Doxygen with a pretty theme will do the job
 - Solid documentation but no fully featured website? Sphinx can be quite good for that
 - Full featured website with news section? Hugo is relatively simple and very flexible
 - You will most likely have to touch HTML and CSS though...

Thank you

Contact

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