

# Migration to Drupal Status

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Geant4 collaboration workshop 2015

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- Current Geant4 web sites
- Migration of TagsDB web interface
- What is Drupal
- Creating new Geant4 web site in Drupal
- Summary
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# Current Geant4 Websites

- <http://cern.ch/geant4> : master of web site
  - plain website based on shtml files in afs, using server side includes
  - Mirror at <http://geant4.org>
- <http://sftweb.cern.ch/geant4> : provides tagsDB web interface and Collaboration agreement tool
  - Linked from main page, but independent site
  - Both tools are custom made Drupal 6 modules, created by Przemyslaw Paprocki in 2010 in time with the migration from cvs to svn
  - Runs on Drupal 6 server provided by SFT.
- Several wiki's for individual working group pages
  - Linked from geant4 site, but are independent
- Validation database portal at FNAL
  - See report by Hans Wenzel
- Grid validation web page



# Evolution of current sites

- <http://cern.ch/geant4> :
  - CERN had offered to create a Drupal site to replace the current plain files based web site
- <http://sftweb.cern.ch/geant4>
  - TagsDB web interface and Collaboration agreement tools need to be migrated out of Drupal 6, either to Drupal 7, or to standard Apache web server.
  - Migrating to Drupal 7 or Apache are both non trivial, and both require code changes
  - CERN/IT security team is pushing to shut down this old web server under Drupal 6
  - Independent from migration of main Geant4 site
- Other sites unchanged:
  - Several wiki's for individual working group pages
    - If requested, these could be moved to the Geant4 site
  - Validation database portal at FNAL
  - Grid validation web page



# Interface to TagsDB and collaboration agreement tool

- Both tools are Drupal 6 custom made modules
- This software needs to be migrated, choices are to
  - Move to **Drupal 7**: we need to adapt for changes in API between Drupal 6 and 7
  - Move to **Apache**: Software becomes independent tool, depending only on standard packages and usable on Apache server
- Choosing where to migrate:
  - Stay with **Drupal**:
    - Migration may be simpler, but may repeat for Drupal 8...
    - Consequences for support given by IT for Geant4 Drupal web site
  - Move to **Apache**
    - Expect stable interface once the tool is migrated
  - In either case code of the tools would not be supported by IT

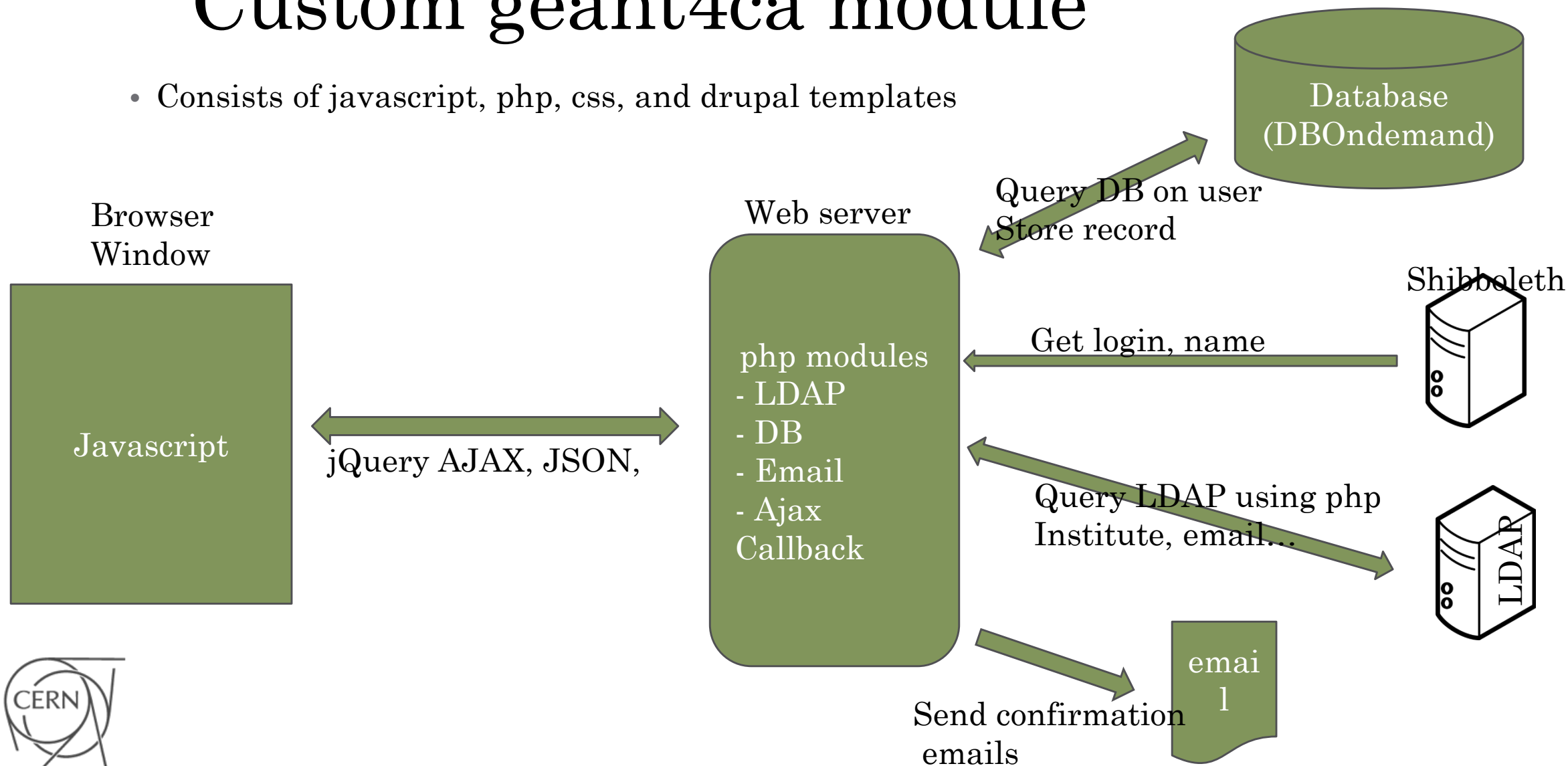
# Migration of Drupal 6 modules

- Used collaboration agreement module to evaluate possibility and effort to migrate to standalone tool, using functionality on Apache server.
- Technologies used in module
  - javascript, jQuery, AJAX, JSON, php, ....
  - Lots of possibilities to learn
- Started migration to independent tool
  - Running on standard Apache webserver provided by CERN/IT
  - No need to change javascript was needed
  - Need to migrate database access from Drupal API to standard PHP/PDO API.
- Collaboration agreement tool already migrated
  - <https://geant4-tools.web.cern.ch/geant4-tools/geant4ca/cgi-bin/geant4ca.php>
- TagsDB is far more code and complicate.
  - Migration is underway.
  - Several more weeks of work.



# Custom geant4ca module

- Consists of javascript, php, css, and drupal templates



# New Geant4 Drupal 7 web site

- Started to create Drupal web site <http://new-geant4-dev.web.cern.ch>
- Stay close to design of current page
- Only few pages created, only Applications is correct and complete
- Addition of major part of pages waits for evaluation of import tool coded by a student
- Created a trial mirror, check at <http://cern.ch/gunter/mirror>
  - Also gave tar file of mirror to Koichi for checking.





## Overview

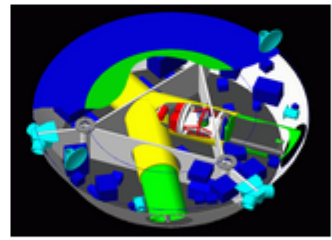
Geant4 is a toolkit for the simulation of the passage of particles through matter. Its areas of application include high energy, nuclear and accelerator physics, as well as studies in medical and space science. The two main reference papers for Geant4 are published in Nuclear Instruments and Methods in Physics Research A 506 (2003) 250-303, and IEEE Transactions on Nuclear Science 53 No. 1 (2006) 270-278.

### Applications



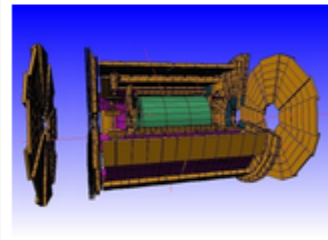
A sampling of applications, technology transfer and other uses of Geant4

### User Support



Getting started, guides and information for users and developers

### Publications



Validation of Geant4, results from experiments and publications

### Collaboration



Who we are: collaborating institutions, members, organization and legal information

# What is Drupal

- It is CERN's choice for web management
- Content Management System and Framework
  - Separate content from layout or look&feel
  - Extensible via modules
- Popular open source (top 3: WordPress, Drupal or Joomla)
- Root and PH/SFT are already in Drupal since ~5 years
- It offers all must-have for a modern web site



# Drupal features

- Powerful system to create web sites
- Database driven, i.e. all content is in database, at CERN this is mysql.
- Layout, or theme, is separate from content
- Themes (can) adapt layout to phone, tab, or desktop
- Pages consist of several areas with content in each area
  - Header, left/right side panel, footer,....
  - [Here](#) is the layout for Bartik theme
- Users have different roles
  - Admin can do anything
  - Editor can create/edit content
    - Geant4 collaborators can edit all Geant4 content;
    - SB content reserved to SB members
  - simple user can read or comment, if comment is enabled
- Wysiwyg editor

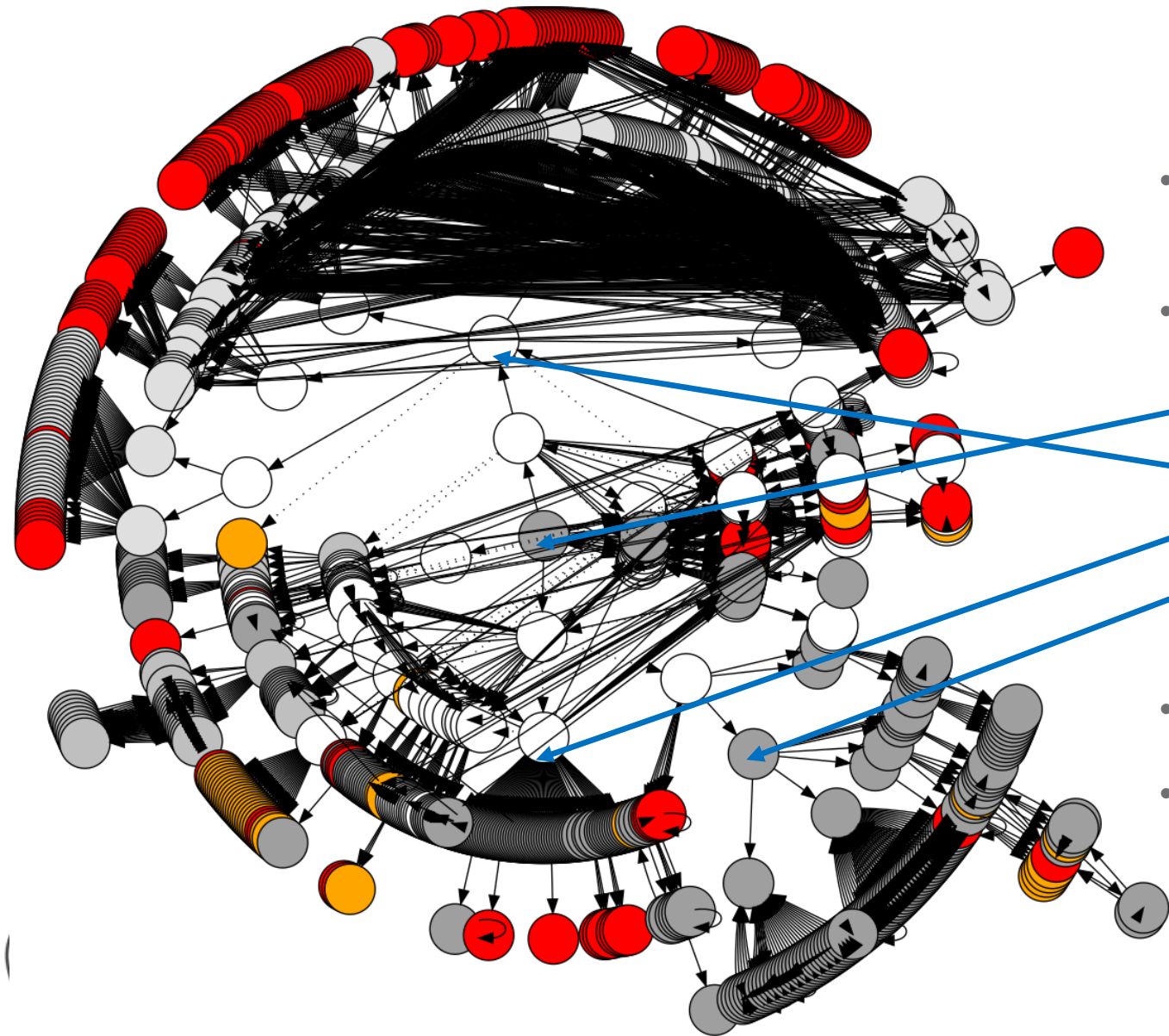


# Importer tool

- Created by the summer-student Leszek Ślażyński in 2011 for a test migration to Drupal 7
  - The site created had problems with protected pages
  - Effort and experience were lacking in Geant4 team
- Importer tool **parses** a website
- Importer allows to **analyse** site structure
  - Via standard tools, a graph of the site can be drawn
    - See [www.graphviz.org](http://www.graphviz.org), pictures shown are from 'twopi'
  - Very useful to understand structure, including link
- Importer handles **import** of parsed site to Drupal
- Importer written in python
  - Using xmlrpc module to communicate with Drupal web server
  - Several other modules used



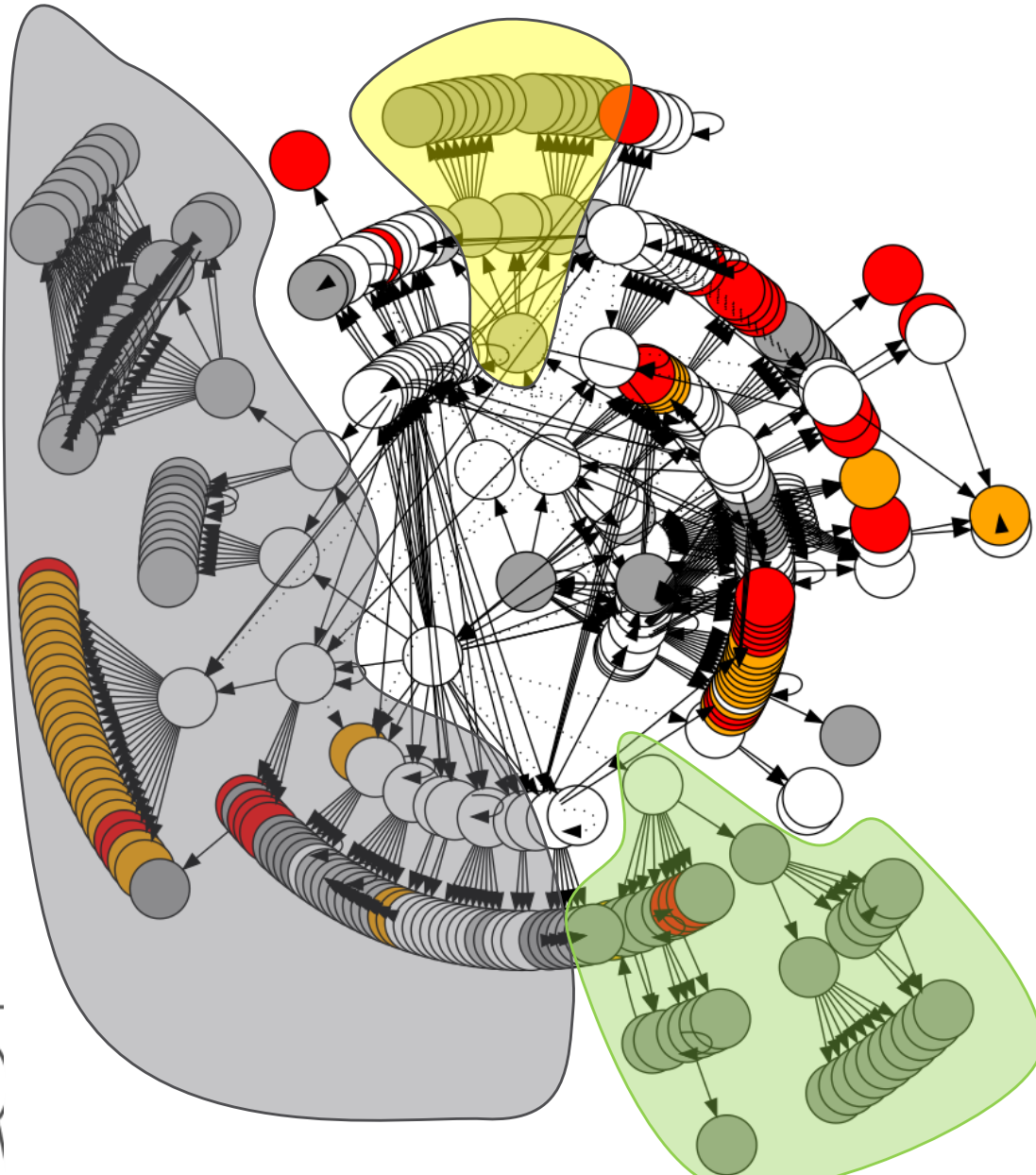
# Structure of G4 website



- <http://cern.ch/gunter/g4-sitemap-full.svg>
- In browser you can see URL for each item
- Geant4 home page is in center
- Process model catalog
- Steering board minutes
- ESA workshop 1999
- Red dots are missing links
- Orange dots represent files not parsed



# Structure of G4 website – 2



- Skipping ESA workshop, process-model catalog and SB minutes
- Geant4 home still in center
- Working groups in grey
- Workshops in green
- OOAD analysis diagram in yellow

# Importer tool - 2

- Very useful to understand site structure
- Graphs can be drawn in different style
  - Graphs shown are 'onion' style where radius corresponds to distance from home page in number of links to follow.
- A full/partial import of pages not yet working
  - Documentation by student incomplete
  - Difficult to debug, due to lack of experience
  - Problems seem to be in setup of Drupal server
- I expect to solve these problems within a few weeks.
  - Already had significant progress last few days, I went from near hopeless to optimistic
- Backup scenario : Manual import of pages
  - Text of page is cut-and-paste, usually layout remains intact
  - Links need to be set manually

# Items still to look into

- Current site has pages which are compiled or generated from other sources
- Importer can import these, but do we want this?
- Most of these pages are in User Documentation pages
  - [Docbook](#) generated pages: Drupal has modules available, DocBook2Book, DocBookWiki, these need to be tried
  - [Latex](#) generated documentation: DruTeX module or single pdf file
    - Currently we only offer PDF file.
  - [Doxygen](#): modules available (Drupal uses Doxygen itself!)
  - Generated physics list documentation
  - Listings of Geant4 members, working groups, ...
    - Drupal should be good to handle this
- Possible solutions for each these need to be evaluated, help by experts in documentation is welcome.



# Summary

- New Geant4 Drupal web site
  - Site exists, but still very limited content
  - Need to add more pages, expecting to get help by the Importer tool.
  - Start to look at solutions for generated pages
    - DocBook user documentation
    - Doxygen documentation, e.g. examples documentation
    - Parts of physics list documentation.
  - High density blobs, as shown in graph of website; i.e. process-model catalog, workshop pages, working group pages
  - Will carry into 2016
- Can we identify content to exclude from this migration?
- Collaboration agreement tool is ready to be put into production
- Finish migration of TagsDB interface
  - Expect this to be a few weeks work, unless unforeseen difficulties arise
  - Beta for testing by end of October
  - Switch to production after release
  - Expect to finish end 2015

# Basic introduction to edit/add pages

- You need to log in to change or add pages
- To edit, go to the page, and click on the edit just below the title of the page
- To add a page, click add content, choose basic page.
  - Give a title, and body.
  - Choose the kind of text, plain asci, filtered or full html; usually we need full html
  - To add a link to another existing page, select the text to become the link, click on the link symbol, choose link type as URL, protocol to be
    - <other> for site internal link, address is something like content/.....,
    - http(s):// for link to external page, address is URL without the http(s)://
  - At the bottom of the page, you set options:
    - you may create an entry in a menu:
      - Select 'Provide menu link'
      - choose parent menu where you want the entry
    - Create a new version, so we can revert
    - Under publishing information, select 'published'
  - Then click SAVE, you may also save before you are fully done and continue later.
    - If you exit without save, all is lost. Going to another page without save also loses changes.

# Material

- Some URL's I found useful
- <http://www.inmotionhosting.com/support/edu/drupal-7/working-with-content>
  - Section 2, Basic pages
- [The Drupal Cookbook \(for beginners\) | Drupal.org](#)
  - Most focussed on creating sites than on editing
- A video showing how to add a basic page,  
<https://www.youtube.com/watch?v=gQUsZk-lJbs>