

Geant4 Documentation

1. Current status and types of “documentation”
2. Process for committing documentation
3. Release schedule – should it be more dynamic?
4. Future plans, publicity and outreach

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Current Status

- “Documentation” covers a number of areas and formats:
 - Guides: application, developers, reference, getting started
 - Formats - output: pdf, html, (both)
 - Formats – input: docbook (guides), direct html (working groups), command-line (html create), oxygen, lxr browser
 - Hypernews is also a “go-to” place for many answers to specific problems, often replacing more complete documentation?
- Restrictions:
 - docbook is not the easiest to format (different html to pdf outputs sometimes),
 - versioning – everything is in the head so difficult to have future developments documented whilst updating current docs
- Some things are only web-based (commands, oxygen), whilst others are only pdf (physics reference manual)
- How to keep things up-to-date with developments?

Documentation Structure

- I believe docbook was introduced in order to have a simple framework to combine pdf and html output for the same documents
- Docbook is “scientific-friendly” written in latex-style
- Drawbacks:
 - package dependency/style files,
 - Cross-linking difficult
 - Versioning is through svn and CVS for the web-pages
 - Not always obvious what is going on
 - Is it maintained and will it become deprecated at some point?
- Should we move to alternative (html only) solution?
- Currently rely very much on Mike's “recipe” for creating the documentation
- Actually need better documentation on making the documentation
- Often contributions are plain text or word then included by me
- Could be a simpler approach?

Docbook or not...

- Drupal integration could create a dependency issue depending upon how this is integrated
- Docbook is
 - useful for simultaneous pdf and html output (latex-style)
 - Difficult if you want to link between documents
 - Generate the output can be a challenge (style files, xml markup, dependency on tools)
 - We have a recipe, but to deviate it from it can be annoying
- Ben had an alternative (sphinx) proposal for cmake documentation which would remain current similar to how doxygen is formulated
- Are there are alternatives, views, solutions?

Cmake documentation

- Proposal from Ben is to use a tool like Sphinx for documenting cmake
- Motivation: scripts can be “marked up” using restructured text and processed through Sphinx like C++/Doxygen
- Like Doxygen - docs are close to what they document and can evolve alongside it.
- The document would also be integrated into the build of Geant4 so is built/installed together with the toolkit.
- Sphinx:
 - <http://www.sphinx-doc.org>

Videos

- A number of videos have been produced by us, mostly for demonstrations/tutorials
- It would be a good idea to aggregate these into a central repository and link to them from our website
- Youtube could also be an option for advertising and educating people on Geant4
- There are already a number of videos created by users:
 - Often out of date
 - Unsupported and unofficial
 - Comments can also be less than desirable...
- What should we do?

Videos

- Advantages:
 - A good format for demonstrating things in a real sense
 - Good publicity
 - Looks nice
 - Potentially wide audience
 - Moves people away from ad hoc, unofficial, inaccurate and perhaps wrong material
- Disadvantages:
 - How to make it “official”?
 - Maintenance – back end
 - Maintenance – keeping it up to date
 - How to standardise?
 - How to invest the effort to make videos?
 - What about missing areas?
 - Our documentation is somehow complete, is it right to pick and choose for videos?
 - How to prevent linking to wrong material?
- Still a nice idea!

Summary

- Documentation can be a bit complicated
 - Split between html docs, dedicated web-pages, pdf, command-line, developers
 - Time-line – follows release, should be more dynamic?
- Docbook creates a little headache, are there alternatives?
- Videos are a new domain for outreach/documenting

Problems with Videos

- Maintenance and keeping things up to date
- Linking to other material – docs, hypernews
- Wider user community – not physicists?
- Youtube – confusing, how to make it official?
- Hosting

Youtube

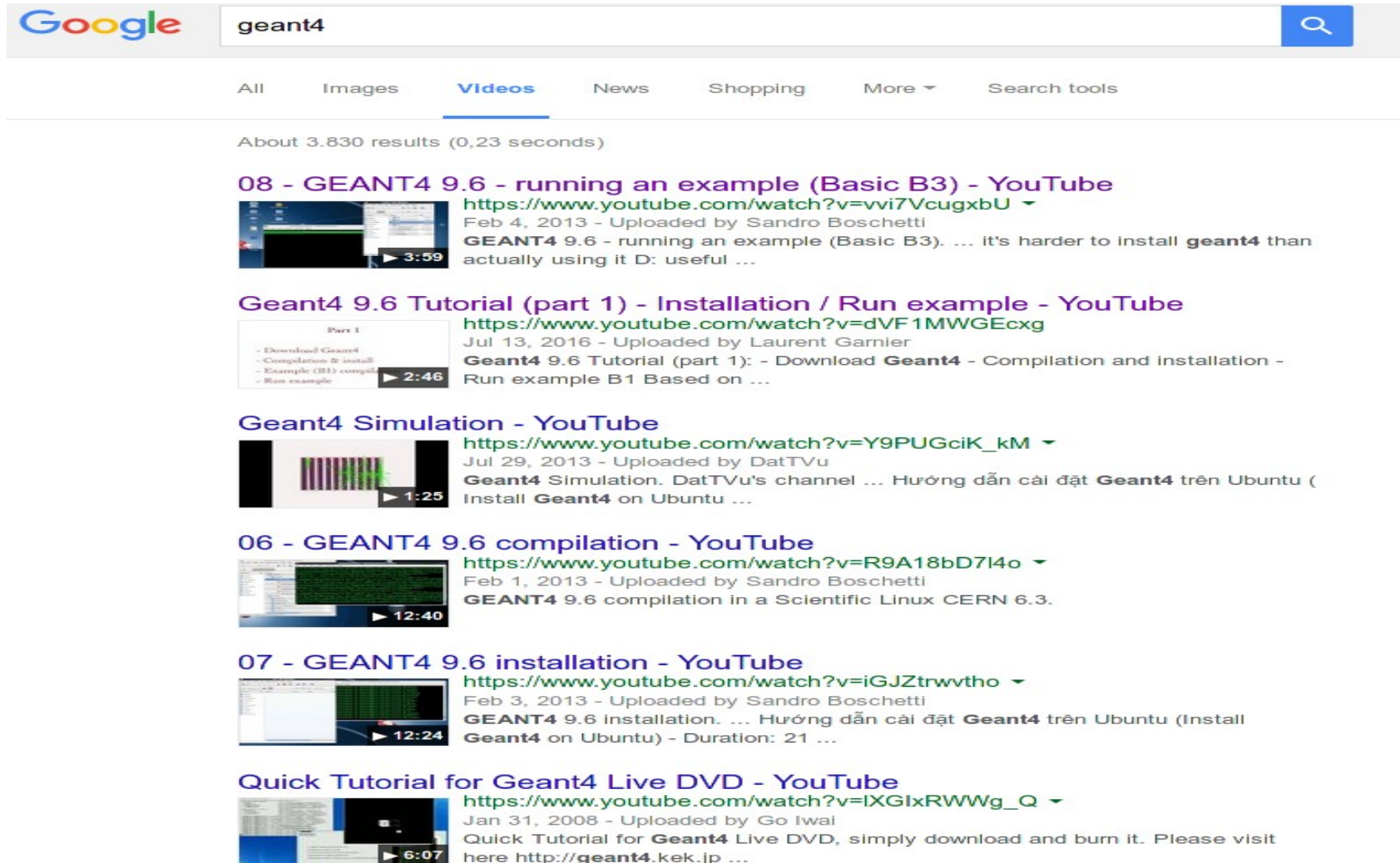
- A common and obvious place would be youtube
- Problem is how to relate this to the other documentation – people often just add comments...
- Disadvantages:
 - Advertising: on the page, before the video etc...
 - No control over linking – next video could be anything?
 - Comments – simply disable? Direct to hypernews?
 - It's very public – trolling, people finding us who have no interest in physics, simulation, computers...
- Advantages:
 - It's easy, popular, respected, could go viral and get millions of hits...

Youtube - thoughts

- Advertising
- Page format
- Auto-play
- Up next lists
- Comments – disabling also looks odd
- It's google...
- Keeping it up to date
- Who decides it's “official”?

Videos

- Google search:



The screenshot shows a Google search for 'geant4' with the 'Videos' tab selected. The search results are as follows:

- 08 - GEANT4 9.6 - running an example (Basic B3) - YouTube**
<https://www.youtube.com/watch?v=vvi7VcugxbU>
Feb 4, 2013 - Uploaded by Sandro Boschetti
GEANT4 9.6 - running an example (Basic B3). ... it's harder to install **geant4** than actually using it D: useful ...
- Geant4 9.6 Tutorial (part 1) - Installation / Run example - YouTube**
<https://www.youtube.com/watch?v=dVF1MWGEcxg>
Jul 13, 2016 - Uploaded by Laurent Garnier
Geant4 9.6 Tutorial (part 1): - Download **Geant4** - Compilation and installation - Run example B1 Based on ...
- Geant4 Simulation - YouTube**
https://www.youtube.com/watch?v=Y9PUGciK_kM
Jul 29, 2013 - Uploaded by DatTVu
Geant4 Simulation. DatTVu's channel ... Hướng dẫn cài đặt **Geant4** trên Ubuntu (Install **Geant4** on Ubuntu ...
- 06 - GEANT4 9.6 compilation - YouTube**
<https://www.youtube.com/watch?v=R9A18bD7I4o>
Feb 1, 2013 - Uploaded by Sandro Boschetti
GEANT4 9.6 compilation in a Scientific Linux CERN 6.3.
- 07 - GEANT4 9.6 installation - YouTube**
<https://www.youtube.com/watch?v=iGJZtrwvtho>
Feb 3, 2013 - Uploaded by Sandro Boschetti
GEANT4 9.6 installation. ... Hướng dẫn cài đặt **Geant4** trên Ubuntu (Install **Geant4** on Ubuntu) - Duration: 21 ...
- Quick Tutorial for Geant4 Live DVD - YouTube**
https://www.youtube.com/watch?v=iXGIxRWWg_Q
Jan 31, 2008 - Uploaded by Go Iwai
Quick Tutorial for **Geant4** Live DVD, simply download and burn it. Please visit here <http://geant4.kek.jp> ...

Videos

- Youtube search:

geant4

Filters About 1,650 results

08 - GEANT4 9.6 - running an example (Basic B3)
Sandro Boschetti
3 years ago • 12,795 views
GEANT4 9.6 - running an example (Basic B3).
CC

Geant4 9.6 Tutorial (part 1) - Installation / Run example
Laurent Garnier
1 month ago • 282 views
Geant4 9.6 Tutorial (part 1): - Download Geant4 - Compilation and installation - Run example B1 Based on Geant4 version 4.9.6 ...

05 - GEANT4 9.6 download and configuration for compilation.
Sandro Boschetti
3 years ago • 7,211 views
GEANT4 9.6 download and configuration for compilation.
CC

Hướng dẫn cài Geant4 trên Windows
Lê Quân
1 year ago • 2,710 views
Geant4 (GEometry ANd Tracking) là một công cụ miễn phí, được sử dụng để mô phỏng sự vận chuyển của các hạt qua môi ...

GEANT4
Hakan Akyıldırım
08 - GEANT4 9.6 - running an example (Basic B3) 3:59
06 - GEANT4 9.6 compilation 12:40
View full playlist (7 videos)

Hướng dẫn cài đặt Geant4 trên Ubuntu (Install Geant4 on Ubuntu)
Lê Quân
1 year ago • 4,561 views
Các gói phần mềm cần thiết: gcc g++ autoconf automake automake1.11 tcl8.6-dev tk8.6-dev libglu1-mesa-dev libgl1-mesa-dev ...

13

Youtube

- The “up next” problem:

The screenshot shows a YouTube video player interface. The main video is titled "Geant4 9.6 Tutorial (part 1) - Installation / Run example" by Laurent Garnier. The video content displays a list of steps: "Part 1", "- Download Geant4", "- Compilation & install", "- Example (B1) compilation", and "- Run example". The video progress is at 0:07 / 2:45. Below the video, the channel name "Laurent Garnier" is visible with a "Subscribe" button and 3 subscribers. The video has 272 views. The "Up Next" sidebar on the right lists several related videos, including "Geant4 9.6 Tutorial (part 2) - Qt interface / making movies /", "Geant4 installation", "Hướng dẫn cài đặt Geant4 trên Ubuntu (Install Geant4 on)", "Geant4 9.6 Tutorial (part 3) - GUI tips", "Hướng dẫn cài Geant4 trên Windows", "08 - GEANT4 9.6 - running an example (Basic B3)", and "What Is Burning Man Like? (2015: My First Burn)".

Youtube

- The “other people” problem:

The image shows a screenshot of a YouTube search for "laurent garnier". The search bar at the top contains "laurent garnier" and shows "About 228,000 results". Below the search bar, there are five video results listed. To the right of the search results is the channel page for "Laurent Garnier", which includes a profile picture, a "Music" category, a "YouTube Mix" video, and a list of "Top Tracks".

Search Results:

- Laurent Garnier Boiler Room DJ Set at Dekmantel Festival**
Boiler Room ✓
2 years ago • 2,732,312 views
FOR AUDIO: <http://bit.ly/1888lkd> → SUBSCRIBE TO BOILER ROOM: <http://bit.ly/1bkrHWL> After his session for WHP last year, we ...
- Laurent Garnier Boiler Room Lyon DJ set**
Boiler Room ✓
1 year ago • 634,539 views
TRACKLIST & DOWNLOAD HERE: blrrm.tv/AZOL29 → SUBSCRIBE TO OUR CHANNEL: <http://blrrm.tv/YouTube> → And go to ...
- Laurent Garnier (full concert) - Live @ Festival Yeah! 2016**
Culturebox ✓
3 months ago • 73,434 views
Culturebox, l'offre culturelle à la demande de France Télévisions, vous propose de revivre en replay Laurent Garnier au festival ...
- LAURENT GARNIER - Crispy Bacon**
djoblo75
3 years ago • 838,069 views
Ricky Le Roy.... Insomnia 1997.
- Laurent Garnier Boiler Room Dj Set at Warehouse Project Manchester**
Boiler Room ✓
3 years ago • 797,304 views
FOR PODCAST: <http://bit.ly/WZhFGO> Celebrating 25 years of Laurent Garnier being a certified boss through the medium of online ...

Channel Page: Laurent Garnier
Music

Top Tracks Albums

Track Name	Duration
Man With the Red Face	8:49
Crispy Bacon	4:25
Acid Eiffel (Live Recording With Bugge ...)	8:17
Wake Up	7:43
Sound of the Big Babou	7:20
Jacques In The Box (feat. The L.B.S. Cr...)	8:21
Flashback (Video Mix)	5:02
Coloured City	6:11
Gnanmankoudji (Horny Monster Mix)	10:14
Astral Dreams (Speakers mix)	6:13

View all

Related Artists

Youtube

- The “other Geant4” video problem:

The screenshot displays a YouTube video player interface. The main video content shows a Windows file explorer window with the 'Filesystem' folder selected. A subtitle at the bottom of the video reads: "I'll take an example from those installed by GEANT4." Below the video player, the video title is "08 - GEANT4 9.6 - running an example (Basic B3)" by Sandro Boschetti, with 12,909 views. The video was published on Feb 4, 2013, and is categorized under Science & Technology. The right sidebar features a "Up Next" section with several related videos, including "Hướng dẫn cài Geant4 trên Windows", "Geant4 9.6 Tutorial (part 1) - Installation / Run example", "Hướng dẫn cài đặt Geant4 trên Ubuntu (Install Geant4 on)", "CERN ROOT tutorial for beginners -- 1. File I/O (TFile)", "05 - GEANT4 9.6 download and configuration for", "New CAD based modeling approach for Geant4 using", and "Лекция №2 Жемчугова А.С. 'Моделирование'".

Youtube

- “comments”:

Top comments ▾



Delfin 1 year ago

I can't run the example, Only what I get is this:
./exampleB3.out: line 3: !!!: command not found
./exampleB3.out: line 6: CMakeCache.txt: command not found
./exampleB3.out: line 7: syntax error near unexpected token `
[Read more](#)

Reply •



Sandro Boschetti 1 year ago

Dear Delfin, in order to someone give to you some help, it would be necessary more information, for instance, are you trying to run this example based on a system entirely described in this tutorial? If any part is different, it is difficult to someone to tell what is wrong. Anyway, I am not dealing with GEANT4 at this right moment. From the few information you gave, maybe it's missing something in the PATH since some commands are not being found.
[Read more](#)

Reply •



yexela 9 months ago

Great, many thanks! It actually works! :)

Reply • 1

Youtube

- More “comments”:



bogdan1207 1 year ago

it's harder to install geant4 than actually using it D: useful video, thanks

Reply • 1

[View all 3 replies](#) ▾



bogdan1207 1 year ago (edited)

+Gwyn Rosaire Make sure you read everything in <http://geant4.web.cern.ch/geant4/UserDocumentation/UsersGuides/InstallationGuide/html/ch02.html#sect.UnixBuildAndInstall>

It's been a while since i installed it, but maybe i could offer you some hints if you provide me with a more specific problem you're encountering? I didn't install it on windows, but on linux mint. The problems don't appear due to geant4, but due to [Read more](#)

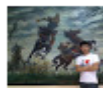
Reply •



Gwyn Rosaire 1 year ago

Followed the instruction on ubuntu, but it was difficult to figure out how to configure the environment. I was hoping I could find a live version that I could install on a partition, but I had no luck on finding one that worked.

Reply •



Bauyrzhan Yessenov 1 year ago

Hello, Sandro!

First, i would like to say thank to you for this tutorial video.

I installed Geant4.10.01 yesterday, but there are several questions:

- I ran exampleB3, but there is no visuliation. What is problem?

[Read more](#)

Reply •



Sandro Boschetti 1 year ago

The option "-D" for openGL while installing GEANT4 is necessary, but not sufficient. You must be sure all necessary drivers for openGL is present and working. See more about mesa driver.

After I finish my dissertation I no longer dealt with GEANT4, so the help I can provide is somewhat limited.

[Read more](#)

Reply •