Life, the Universe and Everything

Is GeoNode the Answer?

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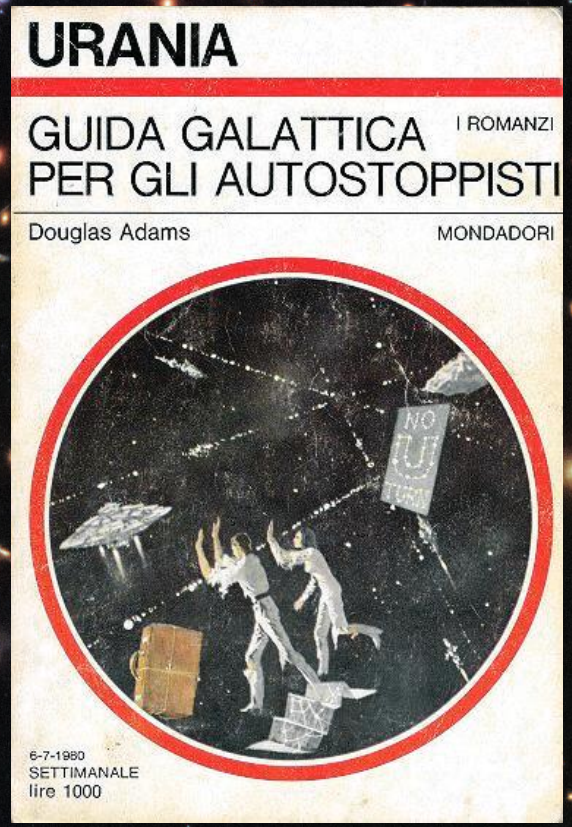
GeoNode Summit 2018

Life, the Universe and Everything is the third book in the five volume Hitch Hikers Guide to the Galaxy science fiction trilogy, written by Douglas Adams between 1978 and 1992
The characters and events in the Hitch Hikers Trilogy give some insight and analogies into how we approach spatial data publishing and analysis….. Let's explore a few….



```
/* @(#)document.aml     1.35 7/5/95 09:11:14
/*-------------------------------------------------------------------
/*            Environmental Systems Research Institute, Inc.
/*-------------------------------------------------------------------/*
Program: DOCUMENT.AML
/*   Purpose:
/*
/* To create and access geo_dataset documentation files, proposed as a standard
/* for use in the USGS Water Resources Division.  The documentation file is
/* created as a combination of INFO and free-format text files that are managed
/* as INFO files to ensure Export/Import translation.
/*
/* Data cataloguing, 90's style!
```

THE HITCH HIKERS GUIDE TO THE GALAXY

Just before the earth is demolished to make way for a hyperspace bypass, our hero, Arthur Dent, discovers his friend, Ford Prefect, is not in fact an actor from Guildford, but is really an alien journalist from Betelgeuse, and a field researcher for the Hitch Hikers Guide. Together, they hitch a ride on the fleet of Vogon demolition space ships and, in a series of bizarre encounters, Arthur discovers that the earth was in fact an experiment, run by mice, to finally give the answer to Life, the Universe and Everything.

The plans for the Hyperspace Bypass were published, just not in a place that anyone on Earth knew about. Are potential users of GeoNode aware of where to look for the information they need?

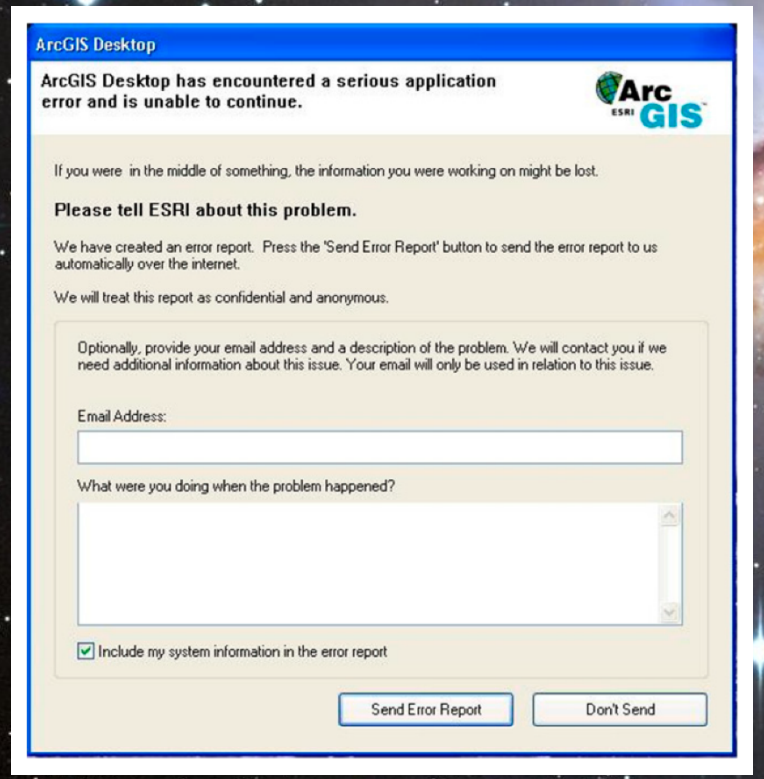
Ford Prefect Arthur Dent

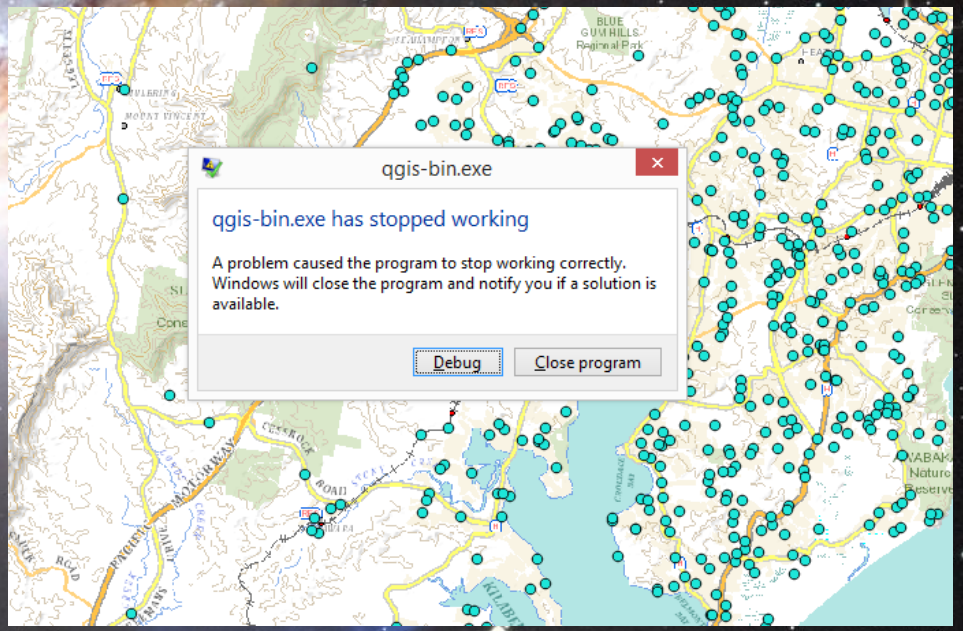
The Hitch Hikers Guide

A Vogon

The destruction of Earth happened fifteen minutes before completing the calculations to come up with the final Answer to the Ultimate Question of Life, the Universe and Everything……

Sound familiar?





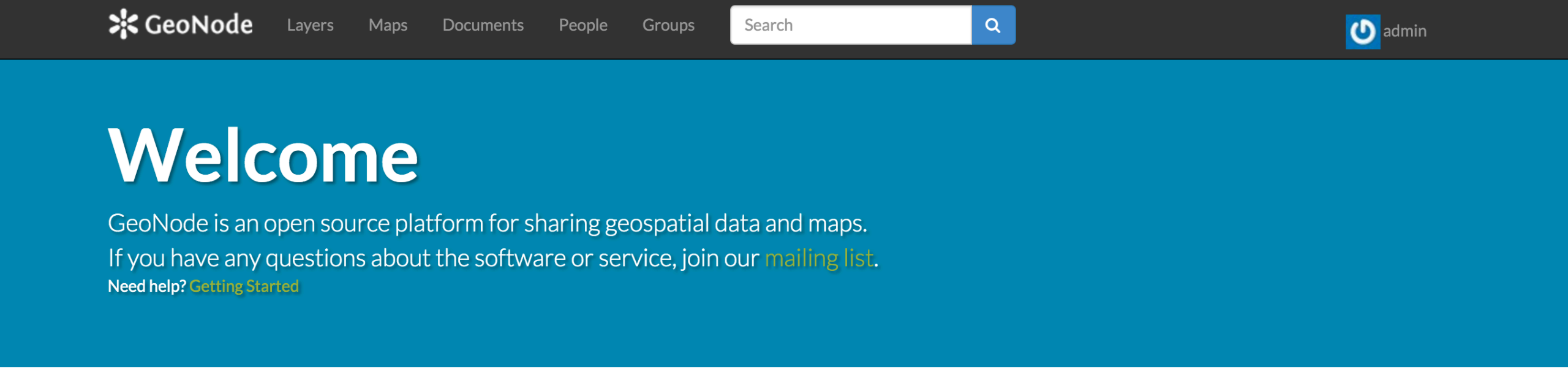
Prior to Earth, Deep Thought was a computer that was created by a pan-dimensional, hyper-intelligent species of beings (actually mice) to come up with the Answer to The Ultimate Question of Life, the Universe, and Everything.

Deep Thought replies that, although tricky, it can provide the Answer, it will just take a little time. Seven and a half million years, to be precise.

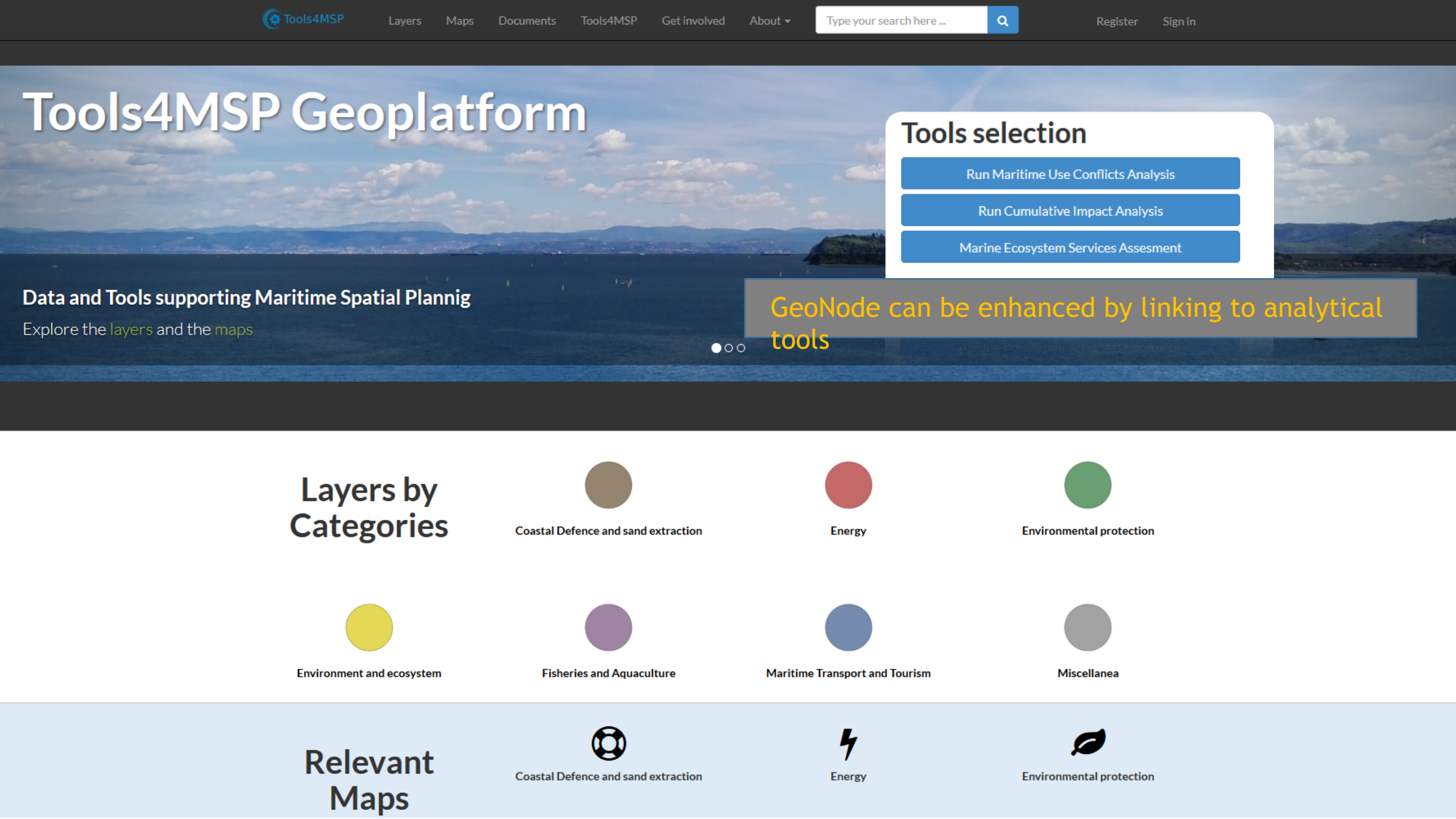
So, maybe a two week PostGIS query isn't so bad after all…….

After 7.5 million years, Deep Thought awakens and announces, with infinite majesty and calm, the ultimate Answer to Life, the Universe, and Everything…….

The Answer is……..



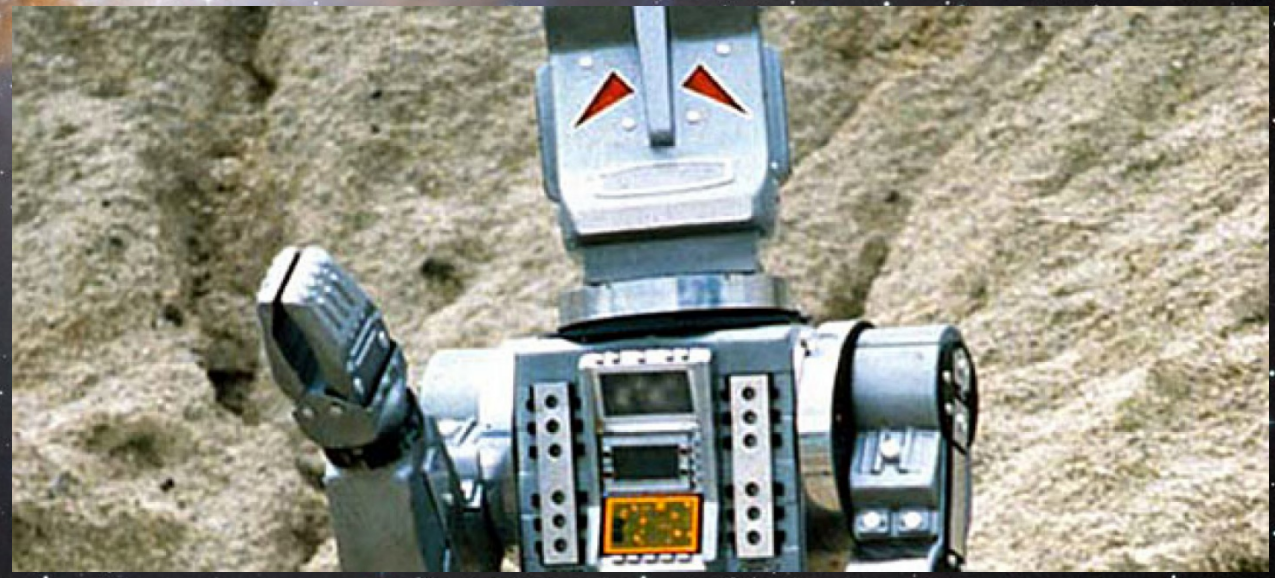
How many GeoNode installations are there out there with “only” 42 layers, maps, documents or users? Do we understand enough about the questions that users want to address?


Tools4MSP
Layers
Maps
Documents
Tools4MSP
Get involved
About
Type your search here ...
Register
Sign in
Tools4MSP Geoplatform
Tools selection
Run Maritime Use Conflicts Analysis
Run Cumulative Impact Analysis
Marine Ecosystem Services Assesment
Data and Tools supporting Maritime Spatial Plannig
Explore the layers and the maps
GeoNode can be enhanced by linking to analytical tools
Layers by Categories
Coastal Defence and sand extraction
Energy
Environmental protection
Environment and ecosystem
Fisheries and Aquaculture
Maritime Transport and Tourism
Miscellanea
Relevant Maps
Coastal Defence and sand extraction
Energy
Environmental protection

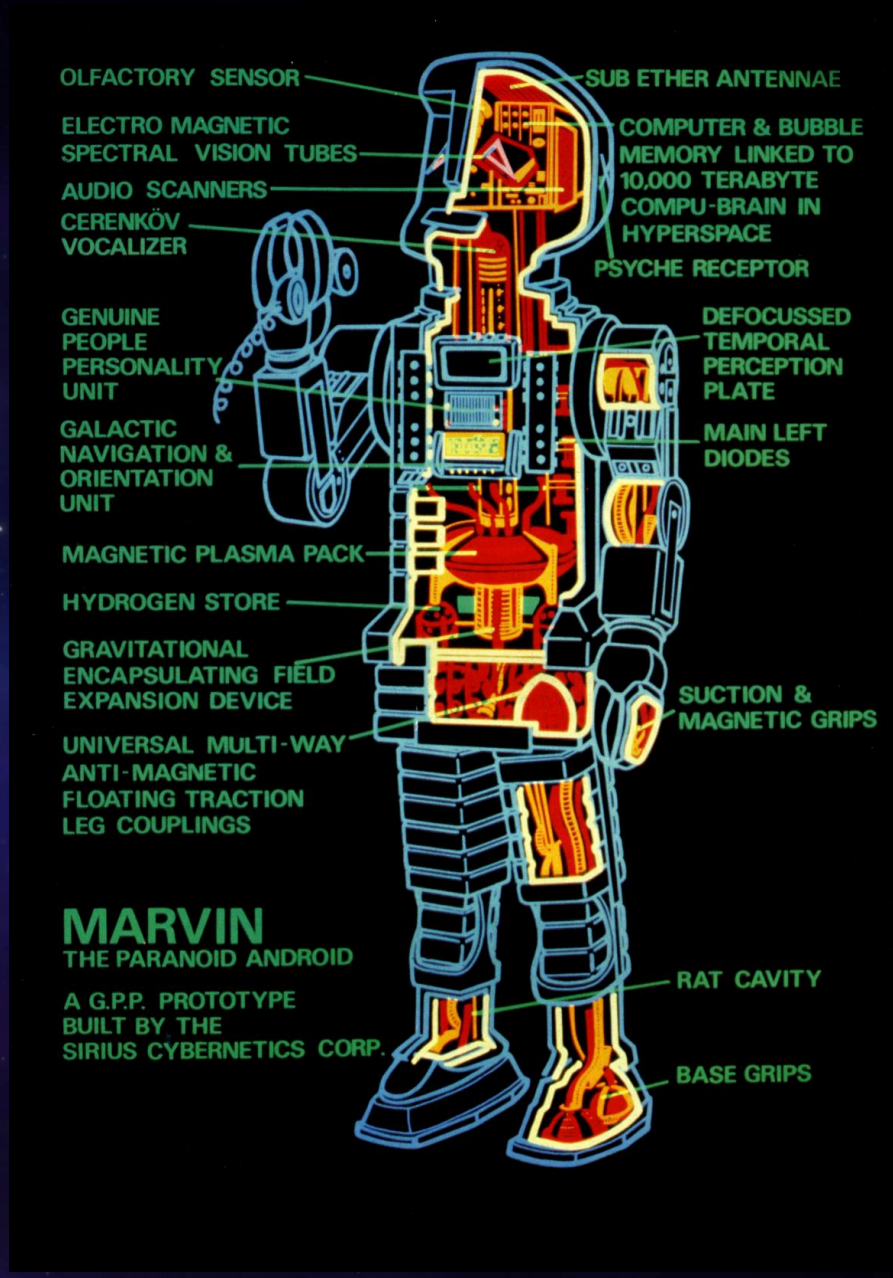
Arthur and Ford encounter Marvin, a paranoid android. He is a failed prototype of Sirius Cybernetics Corporation's GPP (Genuine People Personalities) technology, and is afflicted with severe depression and boredom, in part because he has a "brain the size of a planet", which he is seldom, if ever, given the chance to use.

"The first ten million years were the worst, and the second ten million years, they were the worst too. The third ten million I didn't enjoy at all. After that I went into a bit of a decline."

Even automating metadata can be dull.....



By the way, "Share and Enjoy" is the slogan of the Sirius Cybernetics Corporation Complaints Division



The Hitch Hikers Guide describes space as follows:

“Space is big. You just won't believe how vastly, hugely, mind- bogglingly big it is. I mean, you may think it's a long way down the road to the chemist's, but that's just peanuts to space.”

Para-phrased, do you recognise this?

“Metadata is dull. Really dull. You just won’t believe how vastly, hugely, mindbogglingly dull it is. I mean, you may think reviewing other people's code is dull, but that’s just peanuts to metadata".

How can we make metadata catalogues more engaging and self-sustaining?

Hold stick near centre of its length.

Moisten pointed end in mouth.

Insert in tooth space, blunt end next to gum.

Use gentle in-and-out motion.

These are in fact instructions for using a toothpick. Seeing this led to one of the characters, Wonko the Sane, who has decided to quit society for good, that:

"It seemed to me that any civilisation that had so far lost its head as to need to include a set of detailed instructions for use in a package of toothpicks, was no longer a civilisation in which I could live and stay sane."

If you are like me and deliberately avoid reading instructions wherever possible, how can we make tools such as GeoNode so intuitive that the instructions really are redundant?

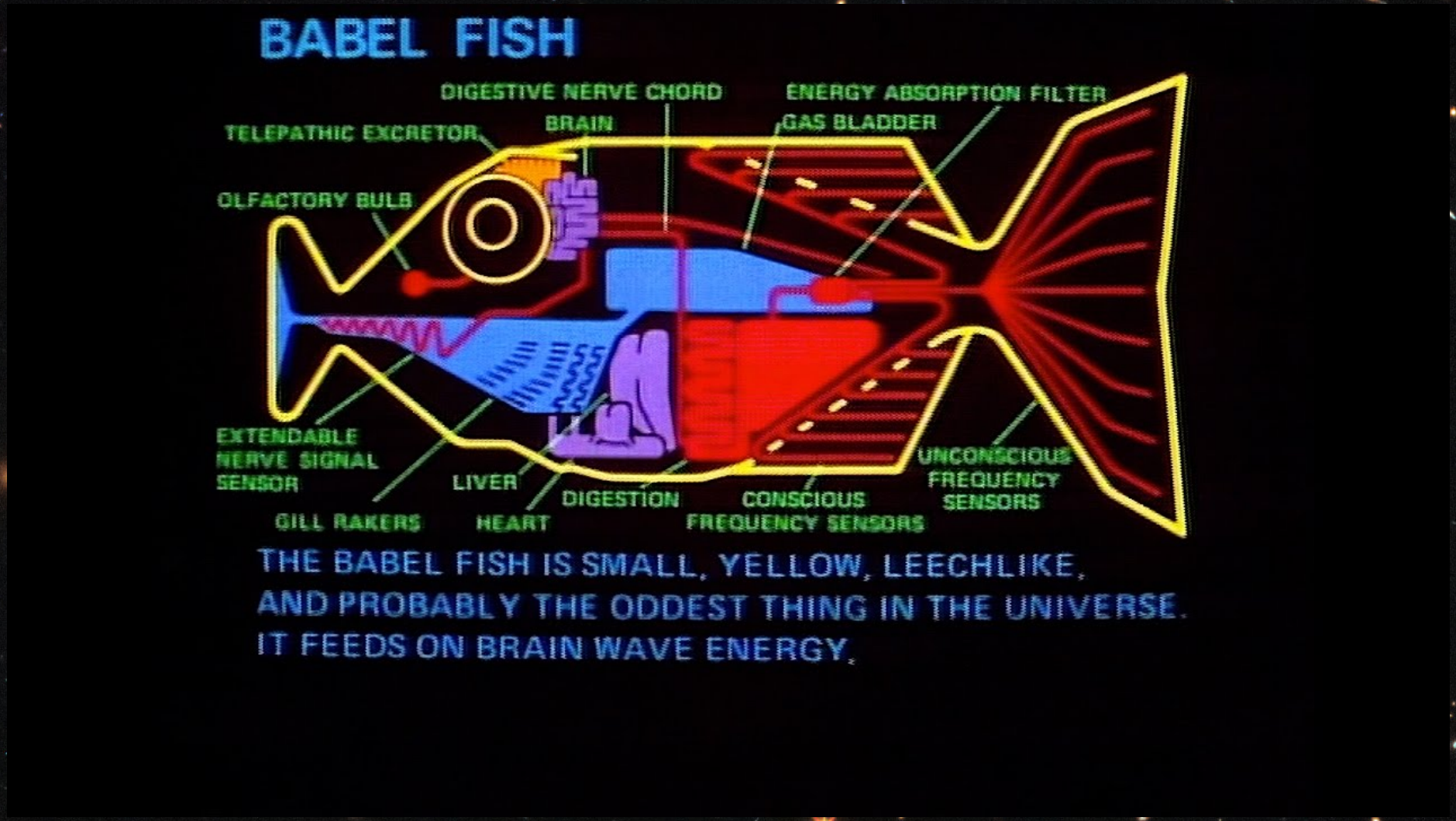
Slartibartfast is a wild-haired designer of planets, from Magrathea.
His speciality is creating coastlines, the most notable of which are the fjords found on the coast of Norway on planet Earth, for which he won an award.

He is a detail person, which sometimes leads him to lose sight of the big picture. On board his space ship, this leads him at one point to stare at the instruments “with the air of one who is trying to convert Fahrenheit to centigrade in his head while his house is burning down”

It is essential to keep the controls simple, and hide complexity from users. Admins also have a big part to play in keeping content simple, such as controlling Keyword / Tag spread…..

Are we encouraging the cartographic equivalent of the fjords…… i.e. are we giving users the tools to easily make beautiful maps?

“Don’t get excited, it’s only a catalogue……..”



The Babel Fish instantly translates any language in the Universe
What are the approaches needed to build truly internationalised, multi-lingual instances of GeoNode?

The most compelling feature of the Guide is not that it is so full of content (which is often wildly inaccurate), but that it has the words “DON’T PANIC” written in large letters on the cover.

GeoNode seems to be going very well – good features and a healthy developer and user community.
Encourage sharing
Keep it simple
Understand users
Make beautiful maps
Read the Guide! And Don’t Panic!

SLIDE1

Good morning everyone and a very warm welcome to Turin and the 2018 geoNode summit. Thank you to ITHACA and all of the organisers. It's an honour to be here.

My job today is to kick off proceedings, to get you in the mood, to get you thinking, to get you talking…. So I thought we'd deal with a nice easy question to start – what is the answer to Life, the Universe and Everything? And, more importantly, is GeoNode the Answer?

SLIDE2

This will take us along a journey which unashamedly uses the inspirational work of Douglas Adams, who produced one of the finest examples ever of science fiction humour in the form of the Hitch Hiker's Guide to the Galaxy. First as a radio play in the late seventies, then a book, then a TV series and eventually a film, with loads of spin offs on the way. Since many of you are from Italy, you may have encountered it as the "Guida Galattica per Gli Autostoppisti"!

Before we get into that though, I should take a moment just to understand a bit more about you. The most obvious question is, are you familiar with the Hitch Hikers Guide? Raise your hand if you've read the book or seen the film or TV series?

Don't worry if you haven't seen or read it – if nothing else today I hope I can convince you to do so – it's worth it…… ideally the book or the TV series, as the film wasn't actually that great, but still worth a watch. If you are genuinely interested, try and get hold of the original radio production, which was fantastic. In any case, you will get a little plot summary in the next 30 minutes, and along the way I hope to get you to think a little bit about how this relates, however marginally, to the story of GeoNode.

And for a bit more background, how many of you are GeoNode developers? geoNode users? General GIS folks? Or, anyone who has come to the wrong event but is too embarrassed to get up and leave?

OK, so let's answer another basic question, which is who am I, and why on earth am I stood up here this morning talking to you?

My name is Steve Peedell, and I'm from the European Commission Joint Research Centre (we'll stick to the acronym JRC for now), about an hour and a half from where we are now, in Ispra, near to Lago Maggiore. The JRC is full of scientists from across Europe and beyond, working on everything from nanotechnology to cybersecurity. There are quite a few current and former JRC folks here in the audience today – I'm delighted there is such strong interest and support for GeoNode. JRC is the "in-house science service" of the European Commission, and I've been there since 1996, when I had a full head of very dark hair. My own field is GIS and natural resource management.

SLIDE3

My very first job on arrival at the JRC was to edit and run a rather obscure script called "document.aml" in ESRI's good old Arc Macro Language. This was based on original work of Doug Nebert of the US Federal Geographic Data Committee. Doug sadly passed away in 2014 in a plane crash, but his work lives on and I was delighted to not only find the original code on the web last week, but that also that it was rigorously documented and had his name right up top on the list of authors. Anyway, I then proceeded to try and catalogue the entire data holdings of our group which was researching the methods that became the technical basis for the EU's Common Agricultural Policy. That's a bit how the JRC works in a nutshell – policy either being decided based on JRC scientific technical input, working with Member States, or coming up with clever ideas how to monitor and implement policies, and quite often using geospatial technology. Fast forward 15 years, with a brief interlude when I worked on a thing called INSPIRE, and I find myself attempting exactly the same cataloguing tasks, this time with home-grown code in python and hooking up to platforms like GeoNetwork and GeoNode. It was probably at some point when I was looking at XML Document Type Definitions, UML diagrams, ISO 19115 standards and other stuff that I decided I should probably hand over the programming baton to someone else, and most recently I have been managing projects and getting others to do the coding. The team I lead now focuses on using geospatial data and technology for better management of protected areas (national parks, nature reserves and so on), in amazing countries across Africa, Caribbean and the Pacific and, like many others, we have adopted

GeoNode as the means to try and facilitate and encourage geospatial data sharing. I'm not a GeoNode expert by any means, so at this summit I hope to learn more about what it can do, how that matches what we are up to, and what GeoNode will look like in the future.

I also at one point helped count the number of olive trees in Europe, but that, as they say, is another story. If you are still asking yourself "Why am I here?" – please sit tight……

SLIDE4

So, back to the Hitch Hiker's Guide. The main protagonist is an unassuming human, Arthur Dent. Arthur is woken up one sunny morning to find that workers have arrived at his house to demolish it to make way for a new road, much to his surprise. Also, unbeknown to him, a fleet of alien Vogon ships are gathering above earth which, by a remarkable coincidence, they are also set to demolish, to make way for a hyperspace bypass.

Despite the protests of ignorance by Arthur, the plans for the demolition of his house had in fact been published for nine months at the local planning office. Unfortunately, the local council's planning department had displayed the plans in a locked filing cabinet in a disused lavatory, in a cellar, with a sign on the door saying "Beware of the Leopard"…….

Similarly, when the Vogon space fleet emerges in the sky above earth and mass panic ensues amongst the people of Earth, there is zero sympathy from the Vogons, as all the charts (and I assume maps) had been on display in the local planning department for 50 years. The only problem was that the planning department was in Alpha Centauri, just over 4 light years from planet Earth.

So, this leads us to GeoNode thought for the day number 1 – are we really doing enough to make people aware of what data, maps, plans are being published? Are we guilty of ticking the box marked "published", thinking that the job is done, but putting it in the digital equivalent of the locked cabinet in the disused lavatory in the cellar?

Luckily for Arthur, and also by amazing coincidence, it turns out that his best friend Ford Prefect is not in fact an out of work actor from

Guildford, but is really an alien journalist from Betelgeuse and a field researcher for the Hitch Hiker's Guide.

SLIDE5

Thanks to the Guide, a Sub Etha Sens-O-Matic listening out for passing alien spacecraft and an electronic thumb, they are both able to hitch a ride on one of the Vogon ships moments before earth is obliterated.

SLIDE6

The destruction of the Earth is a tragic event, for several reasons. Beyond the obvious, yet unbeknown to everyone, is that the Earth was actually an incredibly powerful computer, which for 4 and a half billion years had been doing the calculations to come up with the Answer to the Ultimate Question of Life, the Universe and Everything. Ironically, it was about 15 minutes away from completing these calculations, when it was blown to pieces.

Thought for the Day number 2 – I guess many of you, like me, have experienced that sort of frustration if you've ever done any complex geoprocessing…….How can GeoNode be extended to add analysis functionality and become a stable computational, as well as publishing, platform?

SLIDE7

Prior to Earth, in a galaxy far far away, a pan-dimensional, hyper intelligent species of beings had constructed a computer called Deep Thought to come up with the Answer to the Ultimate Question of Life, the Universe and Everything. In an elaborate turning on ceremony, two programmers are select to tell Deep Thought, which is the size of a small city, of its' quest. When asked if it is indeed possible to come up with ultimate answer, Deep Thought replies that it would be tricky, but could be done, although it would take a bit of time…….. 7 and a half million years to be precise…..

This makes your 2 week PostGIS query look pretty humble by comparison…….

Deep Thought then sets about calculating the Answer to the Ultimate Question of Life, the Universe and Everything. 75 thousand generations later, the descendants of the original philosophers who had set the question assemble, expectantly awaiting the answer. Deep Thought starts to hum and various lights begin to flash as it comes back on line, and confirms that it does indeed have the answer, but that no-one is really going to like it…….

SLIDE8

With infinite majesty and calm, Deep Thought announces that the Answer is……. 42

“I think the problem, to be quite honest with you,” adds Deep Thought, “is that you’ve never actually known what the question is”.

SLIDE9

Thought for the Day Number 3 – should we be giving more attention to the specific questions that GeoNode can answer, or do we assume that its awesome power is sufficient in itself? If we have a GeoNode instance with 42 maps, 42 layers, 42 documents or 42 users, is that the Answer? How many dormant instances are out there which had an initial push, got 42 layers, and then stalled? I am encouraged to see various groups and projects taking GeoNode and adding dedicated functions that do tackle direct questions – after all the components in GeoNode should allow us to do exactly that.

SLIDE10

There are some interesting examples of geoNode being augmented with analysis functions, such as this example looking at marine spatial planning in the Adriatic. How far should GeoNode go in this direction, without losing sight of its core data sharing functions?

SLIDE11

Back to the HitchHikers Guide. Having narrowly escaped the destruction of Earth, Arthur and Ford encounter a robot called Marvin. Marvin is a failed prototype of Sirius Cybernetics Corporation's GPP (Genuine People Personalities) technology, and is afflicted with severe depression and boredom, in part because he has a "brain the size of a planet", which he is seldom, if ever, given the chance to use.

Thought for the Day Number 4 – many users probably think that many of the mundane tasks associated with data cataloguing and publishing are somehow "beneath them". How can GeoNode address this and what strategies work to remove the perceived stigma of anything associated with metadata?

SLIDE12

By another coincidence, the slogan of the Sirius Cybernetics Corporation Complaints Division is "Share and Enjoy"……..

SLIDE13

Data cataloguing tasks can seem overwhelming at times….. What is the scope for GeoNode to promote and integrate tools that can make these tasks more engaging, less frightening, and more likely to be done and maintained over time….?

SLIDE14

"Hold stick near centre of its length. Moisten pointed end in mouth. Insert in tooth space, blunt end next to gum. Use gentle in-and-out motion." These are in fact instructions for using a toothpick.

SLIDE15

Seeing this led to one of the characters, Wonko the Sane, who has decided to quit society for good, that:

"It seemed to me that any civilisation that had so far lost its head as to need to include a set of detailed instructions for use in a package of toothpicks, was no longer a civilisation in which I could live and stay sane."

Thought for the Day Number 5 – how can we make tools that are so intuitive that the instructions really are redundant? Are our assumptions about what is obvious to a user really correct?

SLIDE16

Slartibartfast is from the Planet Magrathea, and a designer of planets. He cuts a kind of Gandalf like figure. His speciality is creating coastlines, the most notable of which are the fjords found on the coast of Norway on planet Earth, for which he won an award. He is a detail person, which sometimes leads him to lose sight of the big picture. On board his space ship, this leads him at one point to stare at the instruments “with the air of one who is trying to convert Fahrenheit to centigrade in his head while his house is burning down”

Thought for the Day Number 6 – Slartibartfast embodies the dilemma of masking complexity and detail. He is also a big fan of geography, with his experience of the fjords and their beauty. Are we really making the best of the cartographic power of GeoNode to visualise the beauty of the world in an engaging way? It’s often all too easy to load some data, enter the required metadata and then use the GeoNode default styling for the associated map. Not everyone is a trained cartographer, but sadly there are many many maps and layer visualisations published by geoNode that are simply not very appealing. This of course isn’t the fault of the tool itself, but helping users to make really great looking maps, in whatever ways possible, surely must be a good thing, right? Likewise, whilst we all understand how to make a data record that is compliant, i.e. which ticks all the right boxes, does that make the metadata “good”, understandable and fit for purpose? Just like the fractal coastline of Norway, are we risking an over-complex landscape in geoNode especially for things like keywords and lists of layers to add to maps?

Before the galactic recession, you could ask the planet builders of Magrathea to design and build a world according to your specifications. As their own marketing material points out “We would like to assure you that as soon as our business is resumed announcements will be made in all fashionable magazines and colour supplements, when our clients will once again be able to select from all that’s best in contemporary geography”.

SLIDE17.

Don't assume everyone is captivated by the simple elegance of geoNode. Unfortunately, Ford's response to viewing the range of planet designs available from the Magratheans is simply "Don't get excited, it's only a catalogue".

SLIDE18

Arthur's first experience of green bug-eyed monsters from outer space is with the Vogons, a race of thoroughly unpleasant bureaucratic creatures, famous for having the worst poetry in the Universe. Unable at first to understand a word of their bizarre, grunt like language, Ford gives Arthur a babel fish. The **Babel fish** is small yellow and leech-like, and considered to be one of the oddest things in the Universe. It feeds on brainwave energy around you and then excretes a telepathic matrix formed by combining the unconscious thought frequencies with nerve signals picked up from the speech centres of the brain which has supplied them. The practical upshot of this is that if you stick a Babel fish in your ear you can instantly understand anything said to you in any form of language.

This is a pretty neat thing to have, even neater than digital watches, yet here on Earth, language is still a barrier.

Thought for the Day number 7. We still often struggle to develop truly internationalized applications – is geoNode truly multi-lingual and what are the best approaches to make interfaces AND content accessible to users in different languages?

SLIDE19

By its very nature, the Hitch Hikers Guide is a catalogue, or compendium. Despite the fact that it has many omissions and is often wildly inaccurate, it has overtaken the great "Encyclopaedia Galactica" as the standard repository for all knowledge and wisdom, because it is a) slightly cheaper and b) has the words "DON'T PANIC" inscribed in large friendly letters on its cover. It is a very unevenly edited book and contains many passages that seemed to its editors like a good idea at the time. There are probably a fair few GeoNodes out there that also fall into the category "unevenly edited"….

SLIDE 20

Final thought for the Day. Don't Panic! GeoNode has already made a massive impact on geodata sharing and publishing, and has made great strides in putting complex geospatial technology in the hands of non-specialists. On behalf of all the users and potential users of GeoNode we are working with, I thank you for your efforts to date. In our own modest way, if we can help in these endeavours, please tell us. I encourage you to think carefully over the next 2 days, and to interact with each other as much as possible, to reflect on how it can get even better. Make beautiful maps. Publish great data. Answer questions. Make a difference. Read the Hitch Hikers Guide when you get home!