

tellurium 52 TE 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 CR 51.996	astatine 85 AT [210]
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Birds, bees and monster fish:

How Drupal serves global biosecurity

Joshua Li
Senior Drupal Developer Technocrat

tellurium 52	carbon 6	hydrogen 1	nobelium 102	chromium 24	astatine 85
TE	C	H	No	CR	AT
127.60	12.011	1.0079	[259]	51.996	[210]

About me

Drupal ID: rli

Twitter: rujiali

- Drupal dev in Technocrat Australia
- Public sector
- Module maintainer
- My second Drupalcon!

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Te	C	H	No	Cr	At
127.60	12.011	1.0079	[259]	51.996	[210]

How the
story begins



Wombat

The policy makers

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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- Australian Government, Department of Agriculture (DoA)
- New Zealand Government, Ministry of Primary Industries (MPI)
- Protects agriculture, food, fisheries and forestry industries by providing quarantine and inspection services and export certification that maintains our favourable pest and disease status
- Negotiates access to international markets for our animals, plants and associated products
- **Provides independent scientific advice, social analysis and science-based quarantine and policy advice (IBIS)**

tellurium 52	carbon 6	hydrogen 1	nobelium 102	chromium 24	astatine 85
Te	C	H	No	Cr	At
127.60	12.011	1.0079	[259]	51.996	[210]

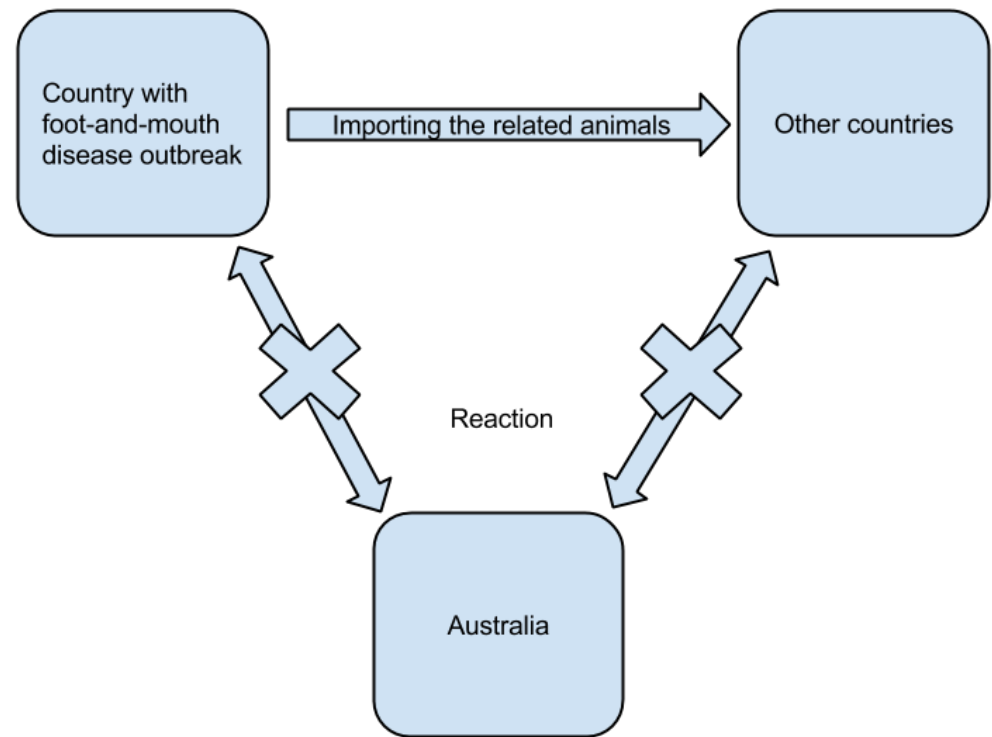
The policy makers

- Australian Government, Department of Agriculture (DoA)
- New Zealand Government, Ministry of Primary Industries (MPI)



tellurium 52	carbon 6	hydrogen 1	nobelium 102	chromium 24	astatine 85
Te	C	H	No	Cr	At
127.60	12.011	1.0079	[259]	51.996	[210]

The policy makers



The news detectors

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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From manual to automatic

- Search for biosecurity news around the world -> spreadsheet
- Evaluate the articles
- Send out the news and the alerts
- Making the policies
- Prototype made by scientist
 - Google blog based news aggregator
 - Written by python from scratch
 - Only focuses on the aquatic animal news
- The idea of sharing



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Te	C	H	No	Cr	At
127.60	12.011	1.0079	[259]	51.996	[210]

IBIS



Ibis

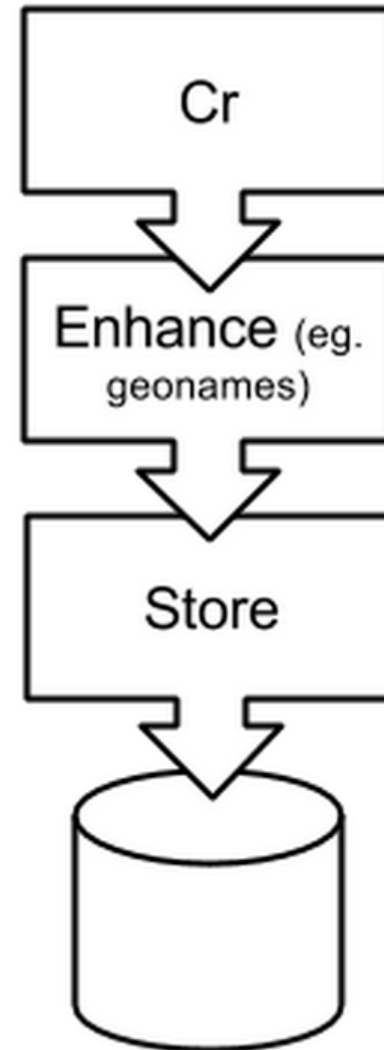
tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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International Biosecurity Intelligence System

- First of all, why Drupal ?
- A real online CMS that serves the global biosecurity community
- People can create their own search queries
 - Customised search query (Untrusted source)
 - RSS feed (Trusted source)
- Multi-languages
- Article workflow
- User preferences for the daily digest

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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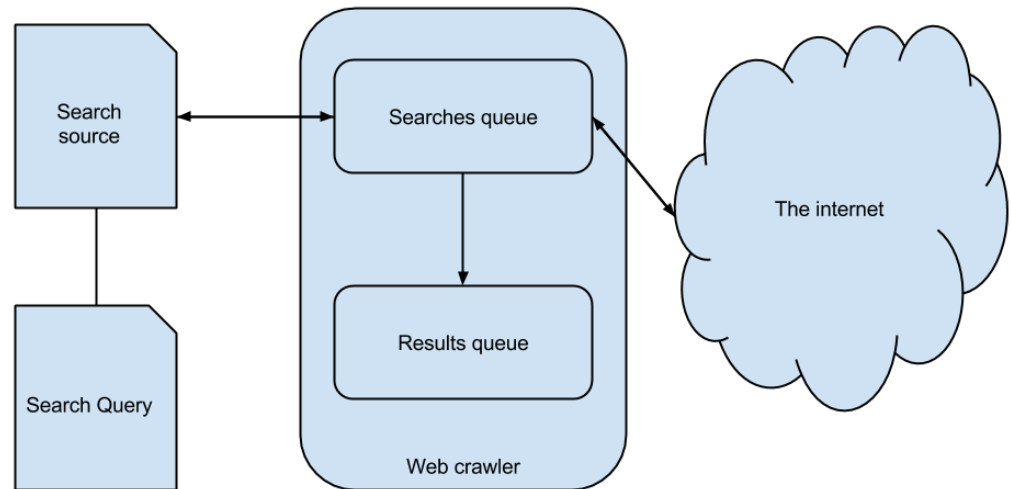
IBIS workflow



tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS workflow

The Crawler



tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS query builder

Searched entity type

Host

Select the type of entity being searched for. Select '- None -' for general queries.

Searched entity

Wild bird

Select the host or pest/disease being searched for. This field may be left blank for general queries.

Language *

English

Select the language for this query.

Query expression builder

Host	Qualifiers	Blocked terms	Blocked sites
<input checked="" type="checkbox"/> wild bird	<input checked="" type="checkbox"/> die-off (die off) <input type="checkbox"/> died <input checked="" type="checkbox"/> disease <input checked="" type="checkbox"/> diseased <input type="checkbox"/> dispute <input type="checkbox"/> disruption <input type="checkbox"/> geographic distribution (distribu <input type="checkbox"/> dying <input type="checkbox"/> emergency <input type="checkbox"/> emergency quarantine <input type="checkbox"/> emerging disease (emerging) <input checked="" type="checkbox"/> epidemic <input type="checkbox"/> establish		<input type="checkbox"/> fmd2010.com.au <input type="checkbox"/> doc.govt.nz

AROUND proximity search for qualifiers (Google only)

Click to recreate the search query expression below. WARNING: this will wipe out any manual edits.

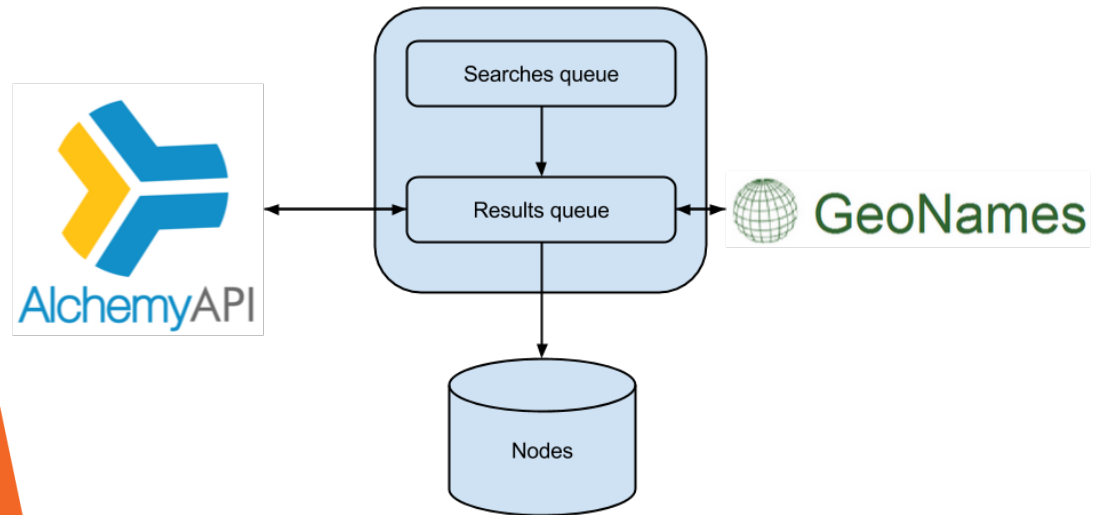
Query expression *

"wild bird" AROUND(3) (bacteria OR deaths OR "die-off" OR disease OR diseased OR epidemic OR infect OR mortality OR parasite OR pathogen OR virus)

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS workflow

AlchemyAPI and
Geonames



tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS workflow

AlchemyAPI

API DOCUMENTATION MENU

- ▼ Documentation
 - › Calling the API
 - › Sentiment Analysis
 - › Taxonomy
 - › Concept Tagging
 - › Entity Extraction
 - › Keyword Extraction
 - › Relation Extraction
 - › Text Extraction
 - › Face Detection
 - › Image Link Extraction
 - › Image Tagging
 - › Author Extraction
 - › Authors Extraction
 - › Language Detection
 - › Feed Detection
 - › Microformats Parsing
 - › Combined Call
 - › Publication Date

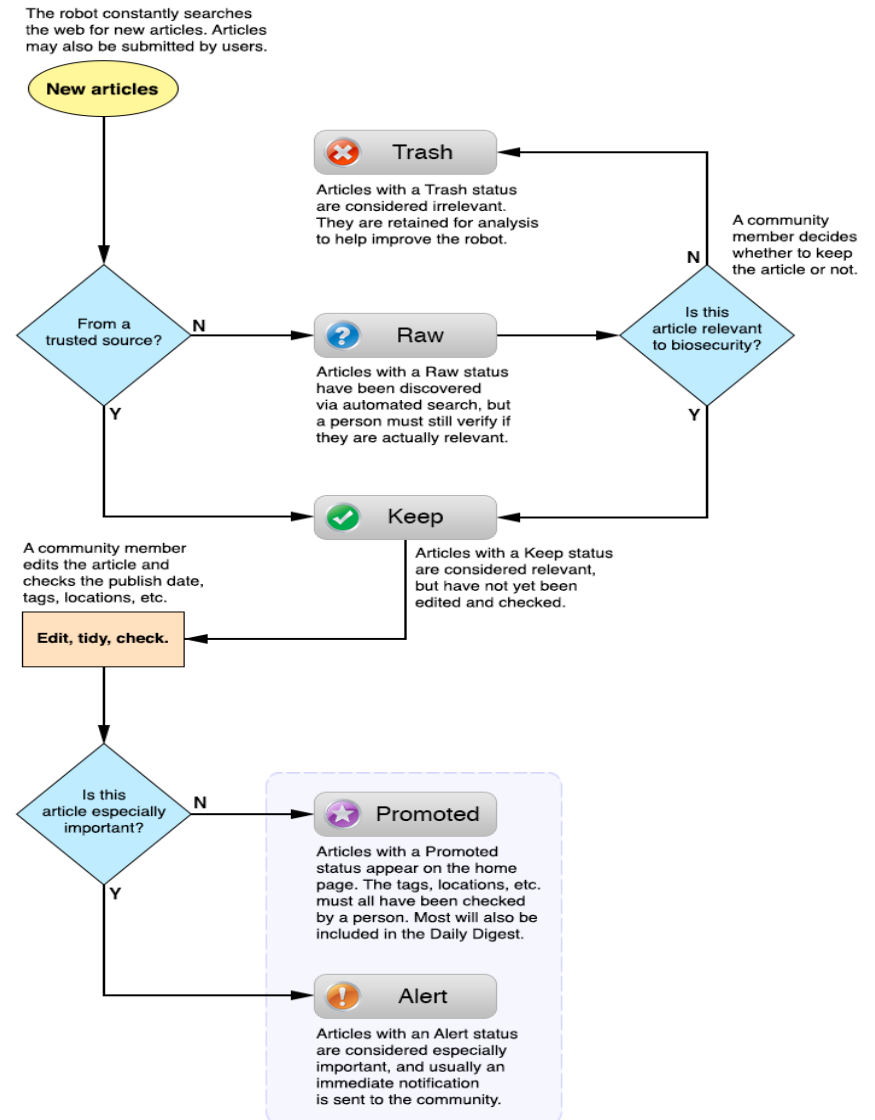
tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS article workflow

Evaluators' life



Tasmanian devil



tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS workflow

The article view

My preferences

Basic

Status

- Alert
- Promoted
- Keep
- Raw
- Trash

Not sure what these mean? See: [How IBIS works](#)

Trusted channels

- Industry
- Research
- Government

Untrusted channels

- Search engines
- Other biointel
- Social
- General

Keyword

blue-green algae

Searches title, text and author.

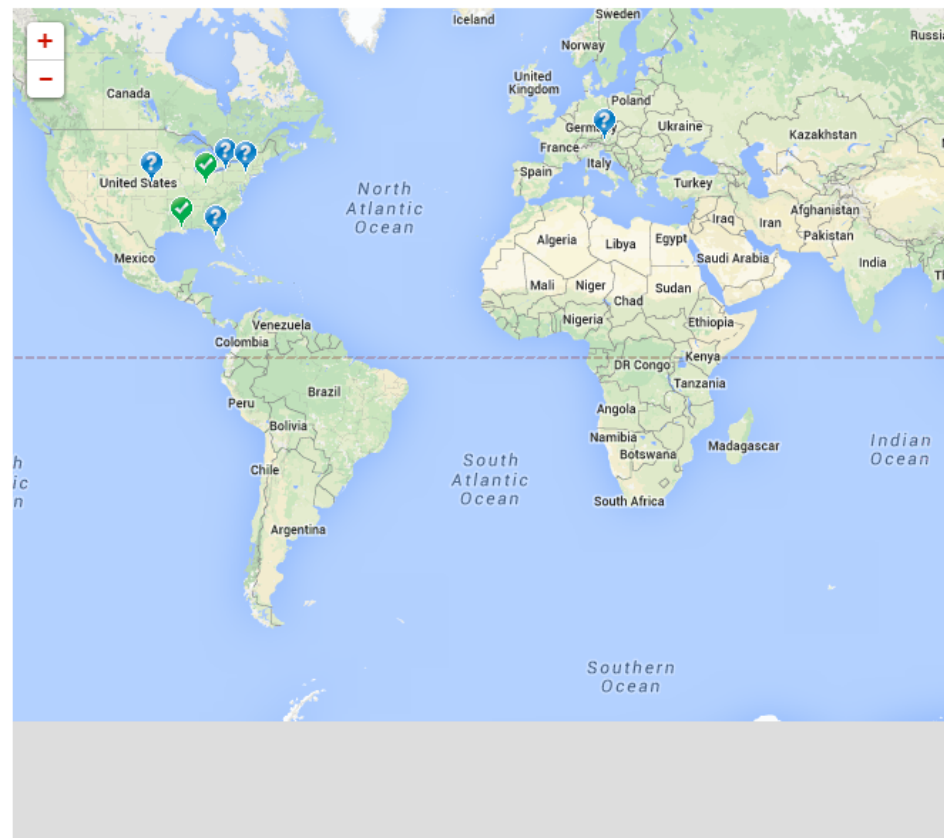
Date discovered *

- Last 1 day
- Last 1 day
- Last 2 days
- Last 3 days
- Last 1 week
- Last 2 weeks
- Last 3 weeks
- Last 1 month
- Last 2 months
- Last 3 months**
- Last 6 months
- Last 1 year
- Last 2 years
- Last 5 years
- Last 10 years
- Last 20 years
- Date range

Articles

- Alert
- Promoted
- Keep
- Raw
- Trash

Not sure what these buttons and icons mean? See: [How IBIS works](#)



Articles listed by publish date.

- 2015-03-10 [View Photo Gallery](#)
- 2015-03-10 [Is a handheld VHS radio good enough? - Ohio Game Fishing Community](#)
- 2015-03-10 [Swimmers warned as flesh-eating bacteria kills three people in Florida](#)
- 2015-03-10 [Carriers of Streptococcus agalactiae or B - PoradnikZdrowie.pl](#)

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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IBIS workflow Daily Digest

IBIS Daily Digest

Dear rli,

Here are the latest articles found by IBIS:

Plant Health					
15-Apr-2015	Australia	Australia calls in international banana experts to aid TR4 fight	Banana, farm	Panama disease, Fusarium, Fusarium wilt	Original article
15-Apr-2015	France	Bacterium Xylella fastidiosa: ANSES and INRA study its pathogenicity for vineyards in France	olive	Xylella fastidiosa	Original article
15-Apr-2015	Australia	New banana levy to fund farmer compensation	Banana, farm, Quarantine	Panama disease, TR 4, Pest	Original article
14-Apr-2015	Australia	'Grey area' over who pays for what in banana disease response	Banana, farm	Panama disease, TR 4	Original article
13-Apr-2015	Australia	Cyclone link in Panama Disease hunt Cairns Post	Banana, farm	Panama disease, TR 4	Original article

Aquatic Animal Health					
16-Apr-2015	Vietnam	Ben Tre clam mortality due to parasite Perkinsus sp - Vietnam Plus	Oyster, Cockle/Pipi	Vibrio parahaemolyticus, Perkinsus	Original article
16-Apr-2015		INDIA - RMS Disease may lead to shortfall in the Seafood industry next year	Prawn	Bacteria, running mortality syndrome	Original article
16-Apr-2015		INDIA - RMS Disease may lead to shortfall in the Seafood industry next year	Prawn	Bacteria, running mortality syndrome	Original article
16-Apr-2015		INDIA - RMS Disease may lead to shortfall in the Seafood industry next year	Prawn	Bacteria, running mortality syndrome	Original article
16-Apr-2015		INDIA - RMS Disease may lead to shortfall in the Seafood industry next year	Prawn	Bacteria, running mortality syndrome	Original article
15-Apr-2015	Brazil	Thousands of Dead Fish Found Floating at Rio Olympics Venue - NBC News	Fish		Original article

Terrestrial Animal Health					
16-Apr-2015		Skunks at Center of Kansas Rabies Spike	Mammal	Rabies	Original article
15-Apr-2015	United States	Bird Flu Confirmed At 8 More MN Turkey Farms - KELOLAND TV	Turkey	Avian influenza	Original article
15-Apr-2015	United States	Bird Flu Discovered In Iowa whotv.com	Turkey	Avian influenza	Original article
15-Apr-2015	United States	Chicago-area dog flu cases climb to over 1,100, including six deaths Latest News Link	Dog	Viruses	Original article
15-Apr-2015	United States	Duck tests positive for bird flu at Bosque del Apache Refuge - KOB.com	Duck, Wild bird	Avian influenza	Original article
14-Apr-2015	Russia	Belarus may resume pork imports from Russia after re-inspecting its plants - Belarus News (BelTA)	Pig	African swine fever	Original article
14-Apr-2015	Chile	Chile Approves US Chilled Pork Imports	Pig	Pork tapeworm	Original article

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The problems



Kangaroo fight in neighbourhood

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Performance

Sleeping time
everyday

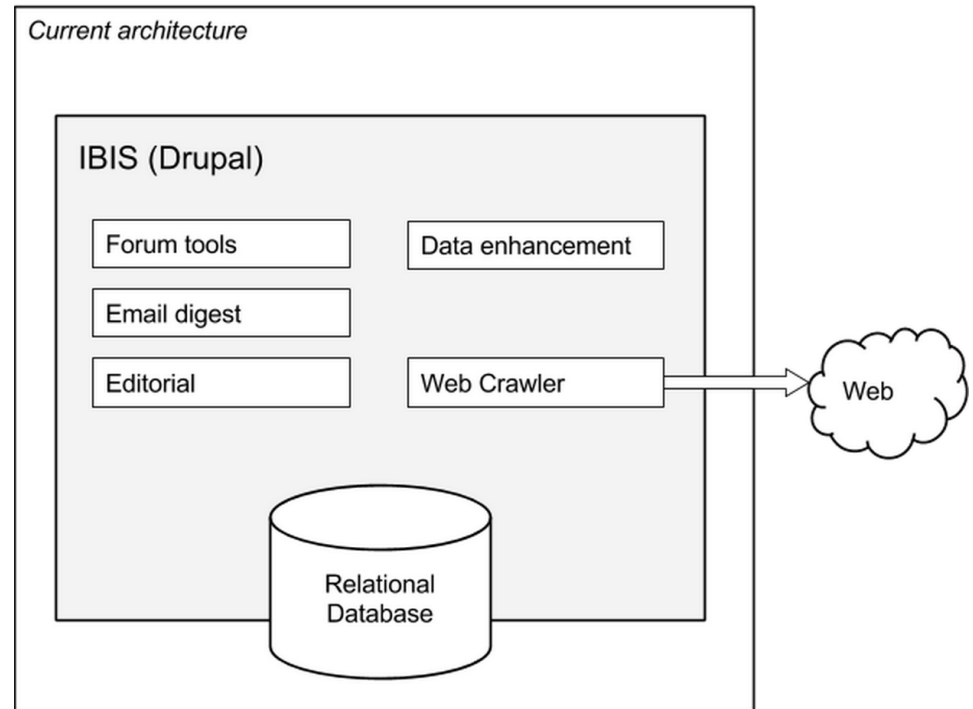


Koala

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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The crawler

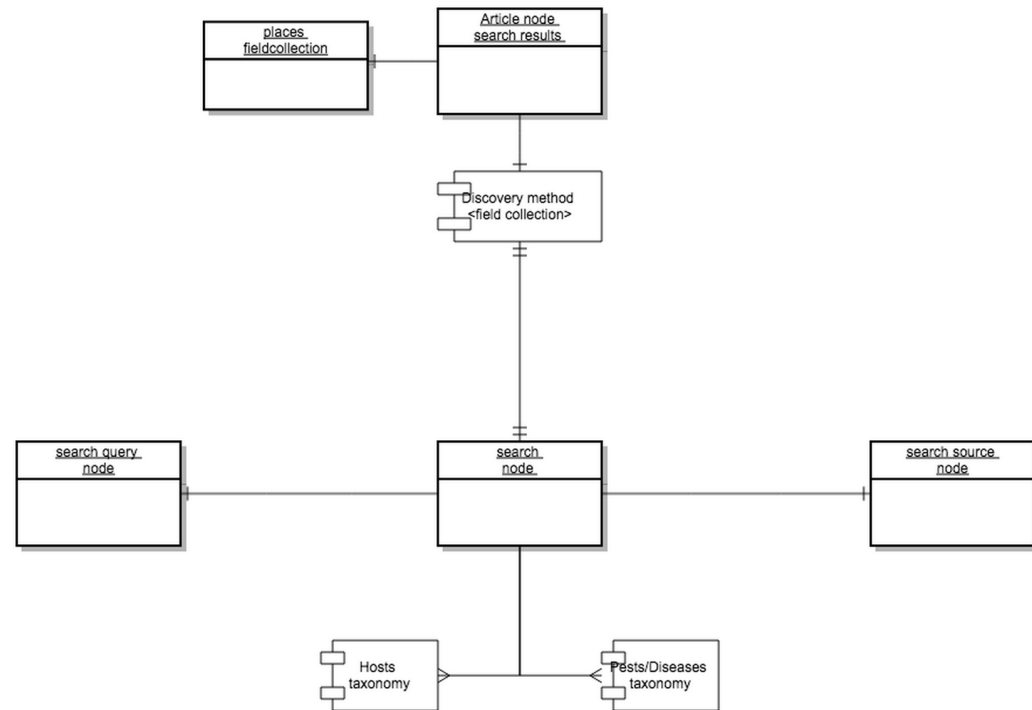
Searches/results
queues

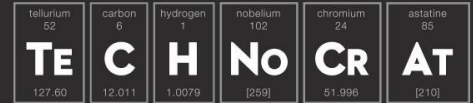


tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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The data structure

Searches/results queues





Data structure

APPS
CEBRA

TIME PICKER
Last 7 days ending now ▾

MONITORING

- Overview
- Map
- Transactions
- Drupal
 - Modules

Sort by ▾

ibis_cache_article_search - SELECT	29.1%
field_data_field_article_places - SELECT	28.6%
node - SELECT	24.8%
field_data_field_article_discoveries - SELECT	4.71%
taxonomy_index - SELECT	1.01%

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127.60	12.011	1.0079	[259]	51.996	[210]

The
future

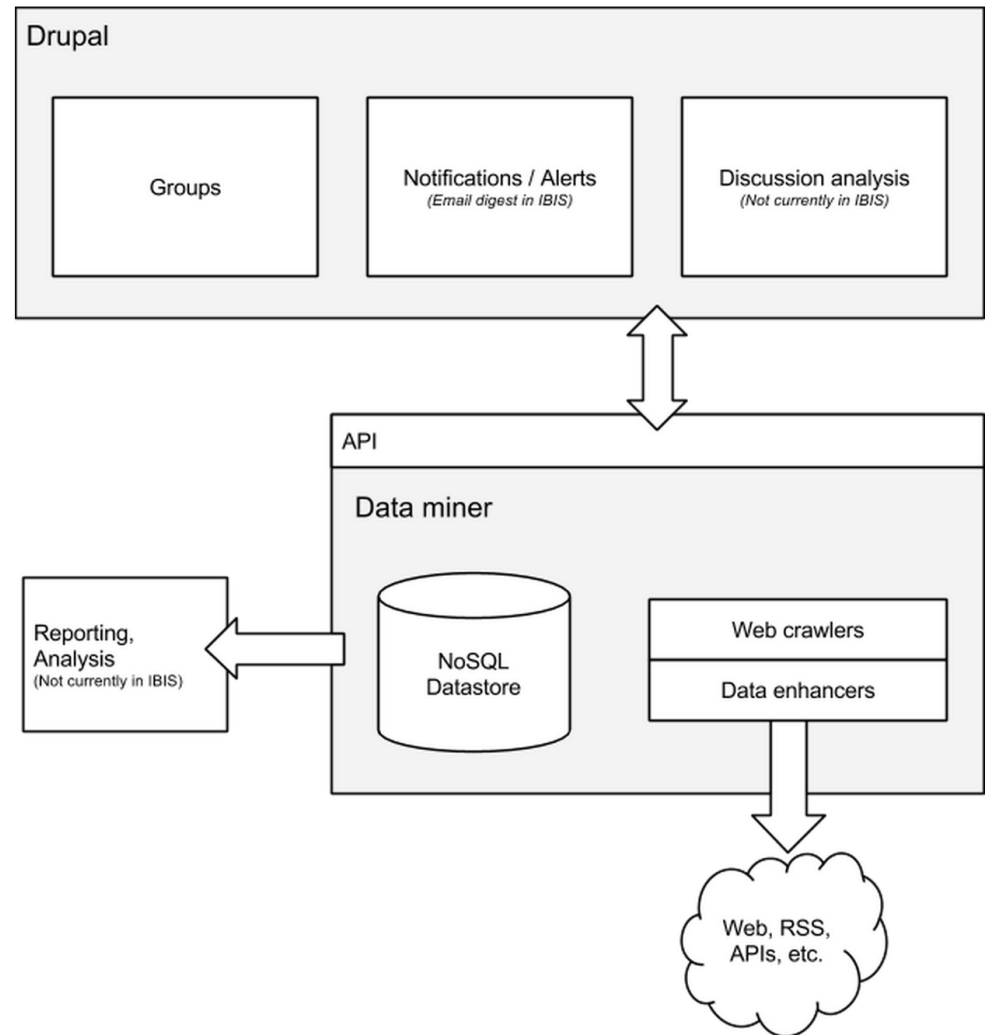


Cockatoo

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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The solution

Move the crawler away!



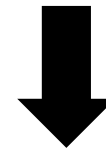
tellurium 52	carbon 6	hydrogen 1	nobelium 102	chromium 24	astatine 85
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127.60	12.011	1.0079	[259]	51.996	[210]

User
experience

From passive
to active



Bluetongue



Frilled Lizard

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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User
experience

From passive
to active

IBIS 

 Log out



Roberto
De Souza

[View profile](#)



ALL ISSUES

6



AQUATIC ANIMAL



YOUR ARTICLES



SHORTCUTS



Plant Health

Articles **20**
Alerts **2**
Region **Pacific Ocean**

4
Issues

This month ▾



Terrestrial Animal

Articles **2000**
Issues **300**
Region **Asia**

82
Issues

This month ▾



Aquatic Animal

Articles **2000**
Issues **300**
Region **Asia**

60
Issues

This month ▾



All IBIS Articles

All articles ▾



Hot Topics



Australian Issues

Change location ▾



1

Terrestrial Animal



1

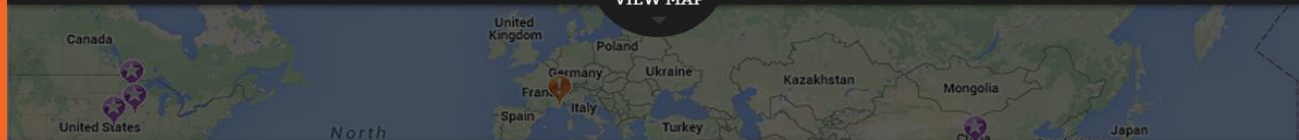
Aquatic Animal



4

Plant Health

VIEW MAP



tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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User experience

From passive to active

- Trade or Market
- Prevention
- Treatment
- Surveillance
- Government
- Environment
- Animal Welfare
- Uncertain
- Other
- Sector**
- Plant ▶
- Aquatic ▶
- Terrestrial ▶
- Host**
- Aquatic ▶
- Plant ▶
- Terrestrial ▶
- Pests/diseases**
- 3D Syndrome
- Animals ▶
- Arge xanthogaster
- Austrothrips drewi
- Bactrocera cucurbitae
- Beet curly top Iran virus
- Beet severe curly top virus
- Botrytis pseudocinerea
- Ceratitis capitata
- Diaporthe novem
- Elsinioe australis Natsudaikai pathotype
- Fusarium circinatum
- Groundnut bud necrosis virus
- Lycorma delicatula
- Penthimiola bella
- Platydemus manokwari
- Pseudocercosporidium carotae
- Xanthomonas fragariae
- Hymenoptera ▶
- Bacteria ▶

Articles listed by publish date.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	CIP SUSTAIN Rwanda Highlighted on CNBC Africa	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Almond farms boom, but skilled labour hard to find	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Producing wine in traditional wool country	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	CIP SUSTAIN Rwanda Highlighted on CNBC Africa	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Alaska's Norton Sound red king crab harvest hits record	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Sernapesca: Chilean farmed salmon health improved in 2014	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	SalmonChile: 5% of coho broodstock wiped out by Calbuco	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	China now has world's second biggest wine-growing area	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Government lifts curbs on industrial urea imports	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Colombia: International certifications lift avocado exports	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Russia tightens EU food import restrictions	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Giumarra blackberry suppliers employ new growing method	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Royse: Drones, water tech and urban farming the future of agriculture	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Now, Agriculture Minister Radha Mohan Singh says 189 lakh hectares hit by rains	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Argentina: Medfly detected in Mendoza	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Russia projects 30% higher salmon catches off Kamchatka	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Nepal earthquake impacts farming regions and Australian-funded agriculture aid program	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	How an RNA gene silences a whole chromosome	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Long-term exposure to air pollution may pose risk to brain structure, cognitive functions	Industry	edit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2015-04-28	Single cells seen in unprecedented detail	Industry	edit

Select all With selected: Keep Trash

1 2 3 4 5 6 7 8 9 10 11 ... next last

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Te	C	H	No	Cr	At
127.60	12.011	1.0079	[259]	51.996	[210]

Distribution/ Drupal modules?

For everyone
to use



tellurium 52	carbon 6	hydrogen 1	nobelium 102	chromium 24	astatine 85
Te	C	H	No	Cr	At
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Questions



Platypus

tellurium 52 Te 127.60	carbon 6 C 12.011	hydrogen 1 H 1.0079	nobelium 102 No [259]	chromium 24 Cr 51.996	astatine 85 At [210]
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What did you think?

Evaluation this session

LOSANGELES2015.DRUPAL.ORG/SCHEDULE

Thank you.