



# Informatie verzamelen en verwerken

## deel 1: informatiebronnen

v3.1

WPO Onderzoeksmethodologie 2016-2017

Faculteit IR – vakgroep INDI

[yannick.verbelen@vub.ac.be](mailto:yannick.verbelen@vub.ac.be)



IN THE AGE OF INFORMATION...  
**IGNORANCE IS A CHOICE**

- Concepten “data” en “informatie”
- Informatiebronnen
- Het Internet als informatiebron
- Adblock
- Betrouwbaarheid van bronnen
- Web of Trust
- “web 2.0”

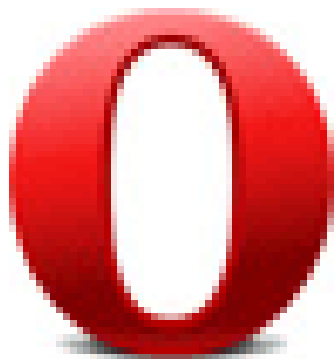
<https://tinyurl.com/rapptor-om>



# Informatiebronnen







- software aan clientzijde
- toegang tot het Internet
- bezoeken van websites
- downloaden van bronnen

[Search Torrents](#) | [Browse Torrents](#) | [Recent Torrents](#) | [TV shows](#) | [Music](#) | [Top 100](#)

Audio  Video  Applications  Games  Porn  Other

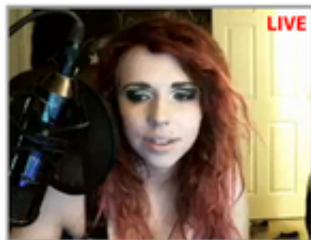
Search results: **The Witcher 3** Displaying hits from 0 to 30 (approx 218 found)

# StreamMe Beta WATCH LIVE ONLINE

<http://stream.me>

[Enter Here!](#)

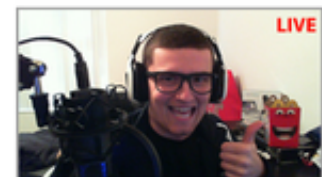
Type	Name (Order by: <a href="#">Uploaded</a> , <a href="#">Size</a> , <a href="#">ULed by</a> , <a href="#">SE</a> , <a href="#">LE</a> )	View: <a href="#">Single</a> / <a href="#">Double</a>	SE	LE
Games (PC)	<b>The Witcher 3: Wild Hunt (Patch 1.12) (GOG)</b> Uploaded 01-12 06:20, Size 476.51 MiB, ULed by mercs215		232	13
Games (PC)	<b>The Witcher 3 Wild Hunt-FLT</b> Uploaded 05-19 2015, Size 22.74 GiB, ULed by extremezone		140	00
Games (PC)	<b>The Witcher 3: Wild Hunt - Hearts of Stone (2.0.0.42) (GOG)</b> Uploaded 01-12 06:21, Size 4.25 GiB, ULed by mercs215		134	19
Games (PC)	<b>The Witcher 2: Assassins of Kings Enhanced Edition Repack</b> Uploaded 05-18 2013, Size 10.83 GiB, ULed by NZupload		115	7
Games (PC)	<b>The Witcher 3: Wild Hunt 16 DLC (2.0.0.41) (GOG)</b> Uploaded 10-09 2015, Size 523.15 MiB, ULed by mercs215		88	1
Games (PC)	<b>The Witcher 3: Wild Hunt - 16 DLC (2.0.0.42) (GOG)</b> Uploaded 01-12 06:21, Size 523.22 MiB, ULed by mercs215		72	2
Games (PC)	<b>The Witcher 3: Wild Hunt Patch v1.07 (GOG)</b> Uploaded 07-18 2015, Size 2.04 GiB, ULed by mercs215		70	10
Games (PC)	<b>The Witcher 3: Wild Hunt v1.05 Update (GOG)</b> Uploaded 06-05 2015, Size 282.6 MiB, ULed by mercs215		46	1
Games (PC)	<b>The Witcher 3 Wild Hunt [Steam-Rip]</b> Uploaded 05-20 2015, Size 29.16 GiB, ULed by OvoJeKraj		45	7
Games (PC)	<b>The.Witcher.Fantasy.Edition.Repack-R.G.Mechanics</b> Uploaded 11-20 2014, Size 19.65 GiB, ULed by Taken009		43	11
Games (PC)	<b>The Witcher Gold Edition (v1.5) (ENG/MuT13) RG Catalyst</b> Uploaded 08-27 2013, Size 5.9 GiB, ULed by DMeTALx		41	3
Audio (Music)	<b>The Witcher 3 Wild Hunt Original Soundtrack</b> Uploaded 05-23 2015, Size 736.64 MiB, ULed by Husain.87		26	9
Games (PC)	<b>The Witcher 2 Assassins of Kings Enhanced Editon-SKIDROW</b> Uploaded 04-17 2012, Size 14.99 GiB, ULed by extremezone		25	8
Games (PC)	<b>The Witcher 3 Wild Hunt (1.04 Patch) (GOG)</b> Uploaded 05-25 2015, Size 273.99 MiB, ULed by Sarah116		24	2
Games (PC)	<b>The.Witcher.2.Assassins.of.Kings-SKIDROW</b> Uploaded 05-16 2011, Size 13.99 GiB, ULed by M&F1A4		22	7



Stream For Free! Chat For Free!  
Watch For Free!

[Watch Live!](#)

- [#leageoflegends](#)
- [#worldofwarcraft](#)
- [#heroesofthestorm](#)
- [#callofduty](#)
- [#hearthstone](#)
- [#counterstrike](#)



Stream what you want when you want.  
Share your talents LIVE!

- [#destiny](#)
- [#dota2](#)
- [#runescape](#)
- [#diablo](#)
- [#battlefieldhardline](#)

# Adblocking



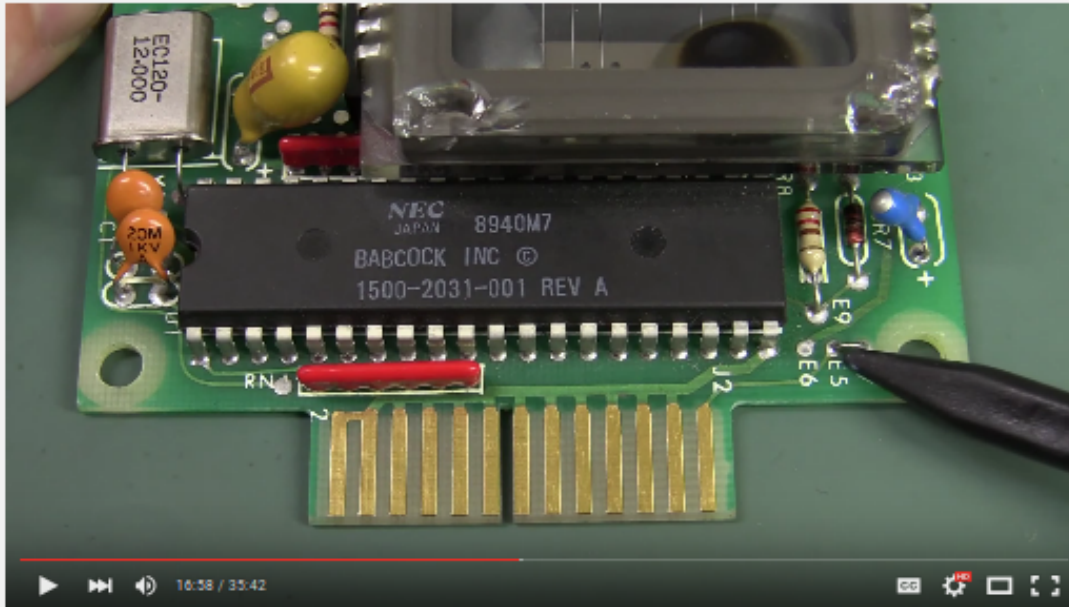
<https://addons.mozilla.org/en-US/firefox/addon/adblock-plus/>



<https://chrome.google.com/webstore/detail/gighmmpiobklfepjocnamgkkbiglidom?hl=en>



<https://addons.opera.com/en/extensions/details/opera-adblock/>



### EEVblog #717 - How To Hack Vacuum Fluorescent Displays

EEVblog Subscribe 329,135

152,623

+ Add to Share More

3,748 63

Published on Feb 23, 2015

Dave explains what Vacuum Fluorescent Displays (VFD's) are, how they work, and then hacks an interface and reverse engineers a surplus Babcock VF-0240-7 display from an industrial machine to make it work with an Arduino.

UPDATE: Found the datasheet: <http://www.eevblog.com/files/Babcock-...>

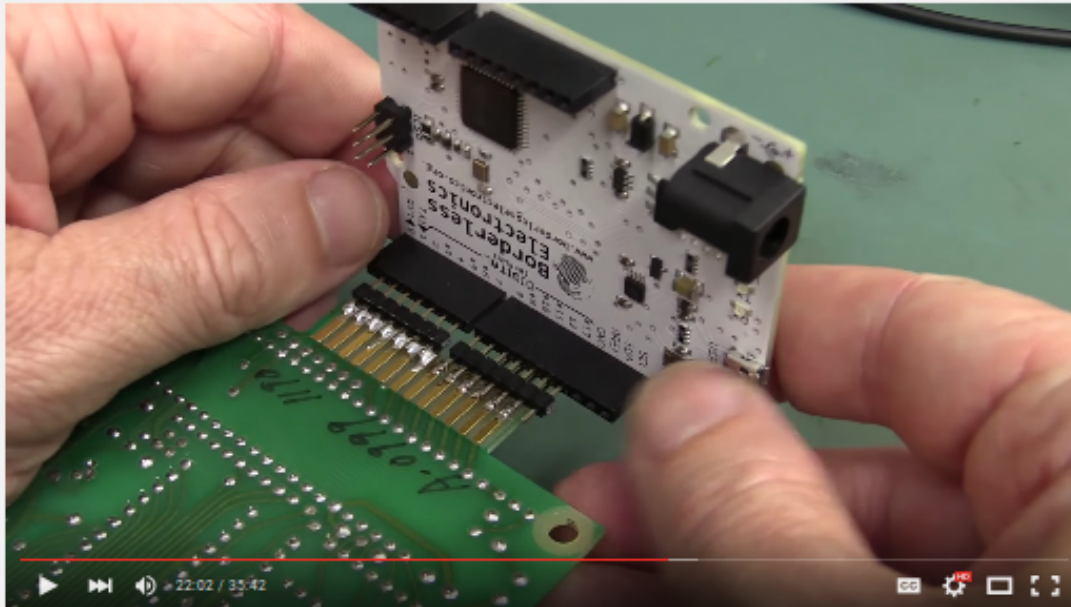
Forum: <http://www.eevblog.com/forum/blog/eev-...>

scarlet Trio  
39€ /mois TV Internet Téléphonie fixe  
REGARDEZ LA TV MOINS CHER

Up next Autoplay

**SPEAKER SCAM!** EEVblog #671 - White Van Speaker Scam Teardown  
EEVblog 498,871 views 38:45

EEVblog #722 - Mailbag  
EEVblog



### EEVblog #717 - How To Hack Vacuum Fluorescent Displays

EEVblog Subscribe 329,135

152,623

+ Add to Share More

5,748 63

Published on Feb 23, 2015

Dave explains what Vacuum Fluorescent Displays (VFD's) are, how they work, and then hacks an interface and reverse engineers a surplus Babcock VF-0240-7 display from an industrial machine to make it work with an Arduino.

UPDATE: Found the datasheet: <http://www.eevblog.com/files/Babcock-...>

Forum: <http://www.eevblog.com/forum/blog/eev...>

Up next Autoplay

**SPEAKER SCAM!** EEVblog #671 - White Van Speaker Scam Teardown  
EEVblog  
498,871 views  
38:45

EEVblog #722 - Mailbag  
EEVblog  
93,115 views  
32:30

EEVblog #763 - Dumpster Plasma TV Bad Cap Repair  
EEVblog  
180,984 views  
21:11

EEVblog #658 - Mailbag  
EEVblog  
122,538 views  
19:48

EEVblog #689 - Back To The Future Time Circuits Troubleshooting  
EEVblog



# Google

HISTORY OF ARCADES

I KNOW WHAT YOU WANT! HERE'S THE WIKIPEDIA ARTICLE ON ARCADE HISTORY.



# bing

HISTORY OF ARCADES

LOOK HOW COOL THIS INTERACTIVE MAP OF PERU IS.

LOVE ME.



# Search query tuning



## How To Google It

**site:**

Only searches the pages of that site.

“ ”

Searches for the exact phrase, not each of the words separately.

-

Excludes this term from the search.

**site:nytimes.com ~college “test scores” -SATs 2008..2010**

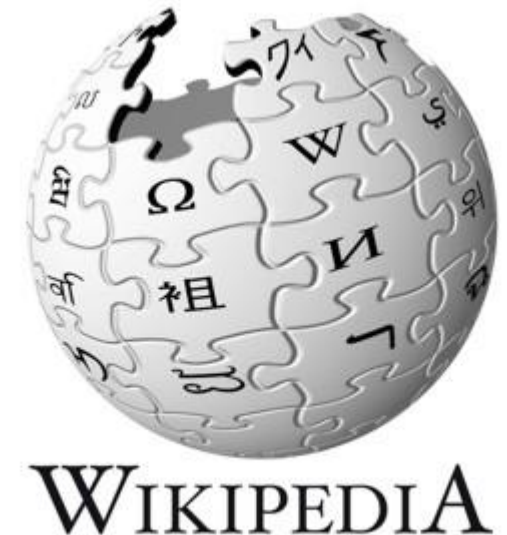
~

Will also search related words, such as 'higher education' and 'university'.

..

Shows all results from within the designated timerange.

# Het (wetenschappelijke) internet



# Wetenschappelijke search engines



- wetenschappelijke publicaties
- referenties en citaten
- zeer betrouwbaar
- gebruik in combinatie met Wikipedia

# Encyclopediae



WIKIPEDIA



- samenvatting van kennis
- secundaire bron
- geeft toegang tot goede primaire bronnen
- weinig kwaliteitscontrole
- dynamisch



Despite CIGS having the advantage over CdTe, which is negatively affected by the issues of both *heavy metal* cadmium usage and rare-earth telluride availability, the development of the CIGS lags behind CdTe commercially. In the laboratory, 18.7% efficiency on a flexible medium was achieved with CIGS cells,<sup>[36]</sup> though it remains to be seen how well mass production values can be achieved with any CIGS cell. In Berlin, Germany, commercial production of flexible CIGS cells has begun, after initial production runs, on an annual 35MW capable facility.<sup>[37]</sup>

## See also

[edit]

- CZTS

## References

[edit]

- ↑ "Thin-Film wins PV market share: Three New Plants in Germany Total Almost 50 MW" . Sustainableenergyworld.eu (2009-03-14). Retrieved on 2011-09-13.
- ↑ Tinoco, T.; Rincón, C.; Quintero, M.; Pérez, G. Sánchez (1991). "Phase Diagram and Optical Energy Gaps for CulnyGa1−ySe2 Alloys". *Physica Status Solidi (a)* **124** (2): 427. Bibcode:1991PSSAR.124..427T . doi:10.1002/pssa.2211240206 .
- ↑ <sup>*a b c d*</sup> Stanbery, B. J. (2002). "Copper Indium Selenides and Related Materials for Photovoltaic Devices". *Critical Reviews in Solid State and Materials Science* **27** (2): 73. doi:10.1080/20014091104215 .
- ↑ Repins, I.; Contreras, Miguel A.; Egaas, Brian; Dehart, Clay; Scharf, John; Perkins, Craig L.; To, Bobby; Noufi, Rommel (2008). "19.9%-efficient ZnO/CdS/CuInGaSe2 solar cell with 81.2% fill factor". *Progress in Photovoltaics: Research and applications* **16** (3): 235. doi:10.1002/pip.822 .
- ↑ ZSW: Press Releases . Zsw-bw.de. Retrieved on 2011-09-13.
- ↑ Hedström J., Ohlsen H., Bodegard M., Kylner A., Stolt L., Hariskos D., Ruckh M., Schock H.W. (1993). "ZnO/CdS/Cu(In,Ga)Se2 thin film solar cells with improved performance". *Proceedings of 23rd IEEE Photovoltaic Specialists Conference*: 364–371. doi:10.1109/PVSC.1993.347154 . ISBN 0-7803-1220-1.
- ↑ Kronik L., Cahen D., Schock H.W. (1998). "Effects of sodium on polycrystalline Cu(In,Ga)Se2 and its solar cell performance". *Advanced Materials* **10**: 31–36. doi:10.1002/(SICI)1521-4095(199801)10:1<31::AID-ADMA31>3.0.CO;2-3 .
- ↑ "First sales for 'world's cheapest solar cells'" . Chemistry world February 2008. Retrieved 6 April 2011.
- ↑ "Process for making solar cells" . United States Patent Application 20090223551. 2009-10-09. Retrieved 10 February 2011.
- ↑ Young, D. L.; Keane, James; Duda, Anna; Abushama, Jehad A. M.; Perkins, Craig L.; Romero, Manuel; Noufi, Rommel (2003). "Improved performance in ZnO/CdS/CuGaSe2 thin-film solar cells". *Progress in Photovoltaics: Research and Applications* **11** (8): 535. doi:10.1002/pip.516 .
- ↑ <sup>*a b*</sup> "Polycrystalline Thin Film Solar Cell Technologies" . National Renewable Energy Laboratory Colorado U.S.A. Retrieved 10 February 2011.
- ↑ "Degradation of ZnO Window Layer for CIGS by Damp-Heat Exposure" . National Renewable Energy Laboratory August 2008. Retrieved 10 February 2011.
- ↑ <sup>*a b c d e f g h*</sup> Kemell, Marianna; Ritala, Mikko; Leskelä, Markku (2005). "Thin Film Deposition Methods for CulnSe2 Solar Cells". *Critical Reviews in Solid State and Materials Sciences* **30**: 1. Bibcode:2005CRSSM..30....1K . doi:10.1080/10408430590918341 .
- ↑ Ihlal, A; Bouabid, K; Soubane, D; Nya, M; Aittalebali, O; Amira, Y; Outzourhit, A; Nouet, G (2007). "Comparative study of sputtered and electrodeposited Cl(S,Se) and CIGSe thin films". *Thin Solid Films* **515** (15): 5852. Bibcode:2007TSF...515.5852I . doi:10.1016/j.tsf.2006.12.136 .
- ↑ <sup>*a b c d*</sup> Repins, I. L.; Stanbery, B. J.; Young, D. L.; Li, S. S.; Metzger, W. K.; Perkins, C. L.; Shafarman, W. N.; Beck, M. E. et al. (2006). "Comparison of device performance and measured transport



[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [more »](#)

Search over 7 million patents.

- uitvindingen
- zeer gedetailleerd
- statisch
- soms moeilijk leesbaar
- relatief betrouwbaar

# Knowledge engines



- kwantiseerbare data
- ideaal voor vergelijkingen
- bewerkingen op datasets
- secundaire bron
- oorsprong data onbekend

# Tijdschriften (journals)



- wetenschappelijke publicaties
- peer reviewed
- gedetailleerde informatie
- zeer betrouwbaar
- vaak primaire bronnen

# Kranten en nieuwswebsites

WALL STREET JOURNAL

THE  
HUFFINGTON  
POST



- verzamelen nieuws
- feiten maar ook geruchten
- interpretatie door journalisten
- secundaire bron



# White papers, datasheets en info graphics



- ongeverifieerde publicaties
- weinig of geen wetenschappelijke ondersteuning
- subjectief
- soms dicht bij reclame



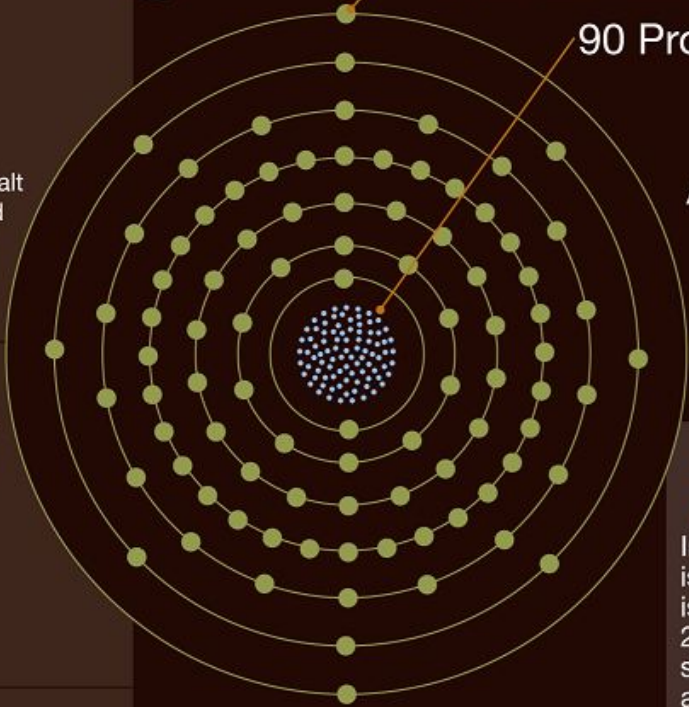
# THORIUM



Thorium is named after Thor, the Norse god of thunder

90 Electrons  
Four of its electrons are valence electrons

90 Protons



## WHAT IS IT?

Thorium is a chemical element

Atomic Number	90
Chemical Symbol	Th
	THORIUM

THORIUM  
**232**  
In nature, thorium is found in the isotope Thorium 232 and decays slowly by emitting alpha particles

**14.05**  
BILLION YRS  
The half life of Thorium 232 is 14.05 billion years

**1828**  
Thorium was discovered in 1828 by Jons Jakob Berzelius

## HISTORY

### 1960-70s

Prototype MSR (Molten Salt Reactors) were developed and tested by the United States at the Oak Ridge National Laboratories.

Based on MSR (Molten Salt Reactor) technology, an experimental reactor was built to study using thorium-fluoride salt kept hot enough to be liquid, allowing for the elimination of the costly fabrication of fuel rods.

### 232Th+233U

This experimental reactor became a part of the MSRE (Molten-Salt Reactor Experiment) that used 232Th as the fertile material and 233U as the fissile fuel.

✓ It operated successfully for about five years.

Thorium naturally occurs on earth and is slightly radioactive in its natural form



You could carry a small amount in your pocket without harm

## HOW IT WORKS

The greatest interest in thorium is in its ability

# Image boards en fora



- vluchtige info
- persoonlijke mening van auteurs
- geen kwaliteitscontrole
- spam & trolls
- moeilijk te doorzoeken



- persoonlijke mening van auteurs
- geen peer review
- rijk aan onzin
- veel foutieve info
- kan zowel primaire als secundaire bron zijn





- geen kwaliteitscontrole
- interessante info quasi onbestaande
- tijdverspilling
- lage SNR
- intellectuele riool van het Internet



# Social Media

## Explained with Donuts



**TWITTER** I'm eating a #donut

**FACEBOOK** I like donuts

**FOURSQUARE** This is where I eat donuts

**INSTAGRAM** Here's a crappy photo of my donut

**YOUTUBE** Watch me eat a dozen donuts

**LINKEDIN** My skills include donut eating

**PINTEREST** Here's a wedding cake made of donuts

**LAST-FM** Now listening to "donut pimpin"

**GOOGLE+** I'm a Google employee who eats donuts

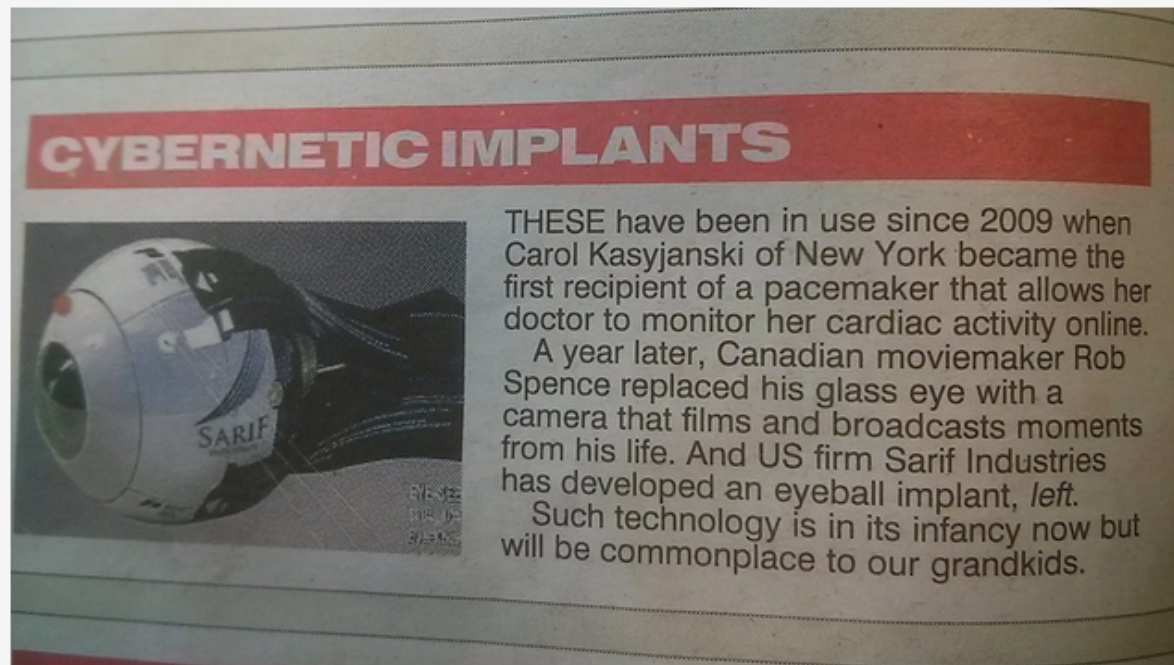
## Waar zoek je naar volgende informatie?

- versterkingsfactor van een BC547-transistor
- gemiddelde afstand tussen zon en venus
- integraal van  $f(x) = 7x \cos(x)$
- wereldproductie saffraan in 2010
- locatie van diepste boorput ter wereld
- chemische samenstelling van torberniet
- aantal afleveringen van Mythbusters
- elektrische lading van een proton
- schakeling voor een differentiaalversterker
- massapercentage Bi in  $\text{Bi}_2\text{Te}_3$

# Betrouwbaarheidsschaal



## British Newspaper Mistakes *Deus Ex* For Real Life



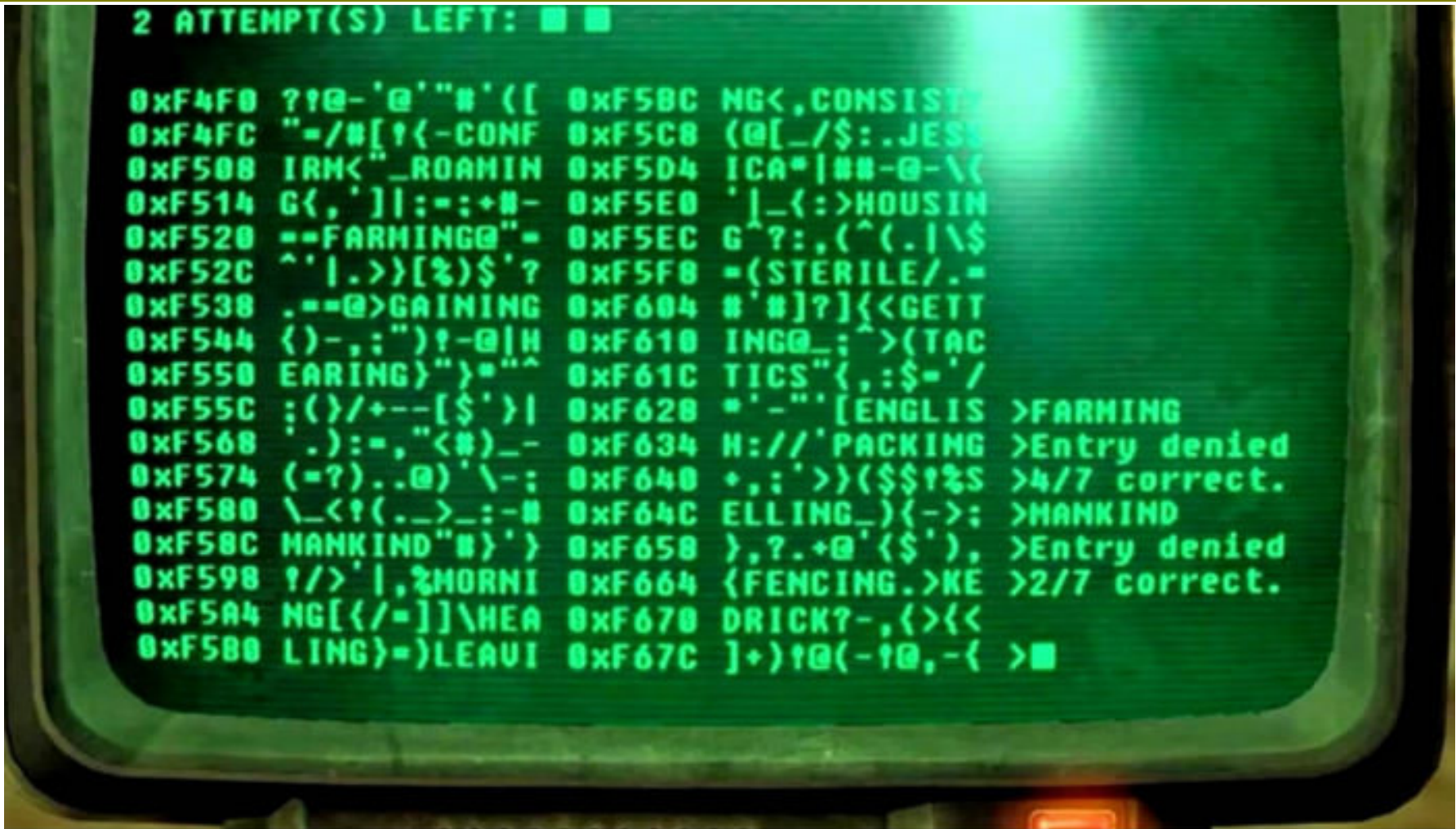
Maybe one day, we'll all have cybernetic eyeball implants that will grant us perfect 20/20 vision and allow us to be monitored by the government agency of our choice. Sadly, as *The Sun's* editors will probably find out soon, today is not that day.

Sarif Industries, the "US firm" mentioned in this recent edition of the British tabloid, is actually a fictional company in the video game *Deus Ex: Human Revolution*. That sweet cyborg eyeball image? Also from the video game. At least Rob Spence and Carol Kasyjanski are real.

Granted, the folks behind *The Sun* don't really care that much about nonsense like "accuracy" or "making sure the news they report isn't actually from a video game." And yes, perhaps eyeball implants will indeed be common in 50 years. But they probably won't come from Sarif Industries.










GAMING

Image Source: Fallout

CNN uses screenshot from 'Fallout 4' to show how Russians hack things





   **PayPal, Inc.**  
Secure Connection

You are securely connected to this site, run by:

**PayPal, Inc.**  
San Jose  
California, US

Verified by: Symantec Corporation

[More Information](#)

# r online payment

-mail and password, that's all you need.  
account or top up balance via Bancontact to instantly shop

**Sign up for free**

Own a business? **Open a Business Account**




the first website in the world to provide mass & public access to research papers

# SCI-HUB

...to remove all barriers in the way of science

enter URL, PMID / DOI or

 open

# Het "web 2.0" probleem

## WOT Reputation Scorecard facebook.com



### facebook.com

Description:

Popularity:

Ranking: 1 [View ranking list](#)

Server location:

▶ [See owner at whois Domain Tools](#)

▶ [Discover similar sites](#)

### Ratings

Reputation ratings are based on real user ratings and they tell you how much other users trust this site. **How reliable are the ratings?**

[Rate this website](#)

#### Trustworthiness



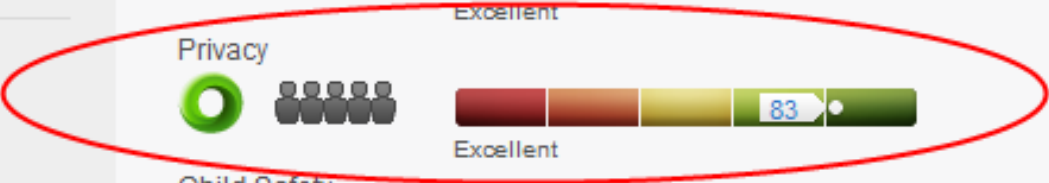
#### Vendor reliability



#### Privacy



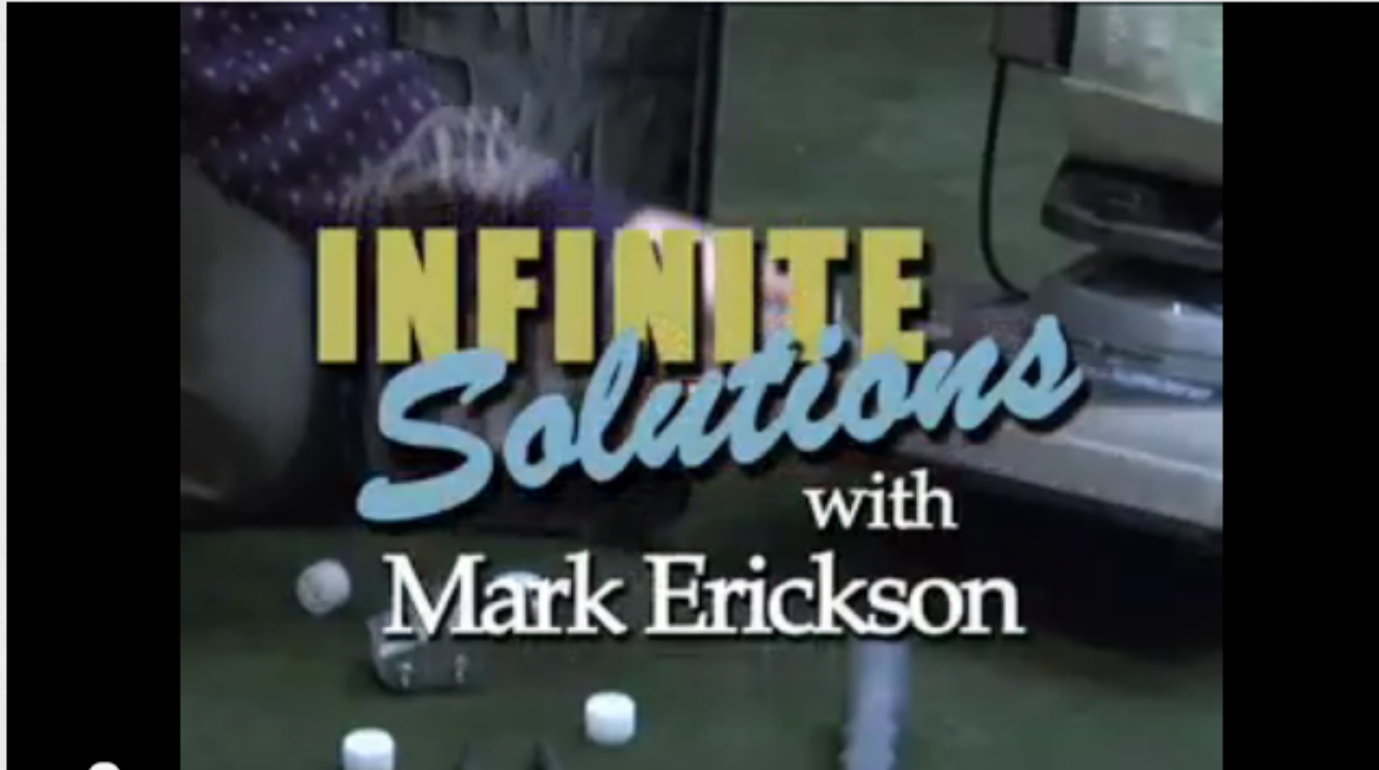
#### Child Safety





# How to Recharge Batteries

[infinitesolutions](#)
+
[Subscribe](#)
13 videos



Video player controls: play/pause, volume, 0:07 / 2:04, CC, settings, full screen, and other icons.

[Like](#)
[Dislike](#)
[Share](#)

2,108,317

Uploaded by [infinitesolutions](#) on Jan 31, 2007

The right kind of batteries are never around when you need them. I'm Mark Erickson, and this is Infinite Solutions: Home Edition. In this episode, I'll show you how to recharge dead batteries using other types of batteries that still carry a charge.

5,755 likes, 1,473 dislikes

As Seen On:  
[Yahoo! Answers: Consu...](#)

[HOME](#)[BROWSE CATEGORIES](#)[ABOUT](#)**Ask****Answer**

Andrei  
Serban

## Why is the moon black and white in all photos?

Other planets pictures are in color, and yet the moon is in black and white.

2 years ago

[Report Abuse](#)

Betelgeu...

### Best Answer - Chosen by Asker

There's very little to give the moon any color. Much of the surface is basalt, which is grey. Almost half the surface chemical composition is silica, which is colorless, followed by aluminum oxide, also colorless. But there are lesser amounts of other materials which give it slight variations in hues, although a little below our color threshold.

2 years ago

[Report Abuse](#)

blazedan...

the moon is actually made out of black and white cheese. this is the reasoning of the color.

2 years ago

[Report Abuse](#)

1 person rated this as good

Rangschik volgende websites volgens betrouwbaarheid:

- <http://avaaz.org>
- <http://www.deredactie.be>
- <http://www.wwf.org.au>
- <http://www.thalys.com>
- <https://plus.google.com>
- <http://www.nist.gov>
- <http://www.linear.com>
- <http://web.mit.edu>
- <http://powermems2013.org>

## Deel I: onderzoekspaper

- individuele onderwerpenlijst: <https://tinyurl.com/om-subjects>
- **5 bladzijden, Liberation Serif, 12pt**, doorlopende tekst
- nadruk op wetenschappelijke schrijfstijl en bronvermelding en taal
- **Deadline: 31 maart 2017**, in te leveren: PDF via Pointcarré

## Deel II: presentatie

- individuele presentatie over jouw onderwerp
- max. 20 slides, max. 10 minuten
- datum & planning volgen later





Vrije Universiteit Brussel

# **Informatie verzamelen en verwerken**

## **deel 1: informatiebronnen**

v3.1

WPO Onderzoeksmethodologie 2016-2017  
Faculteit IR – vakgroep INDI  
yannick.verbelen@vub.ac.be



IN THE AGE OF INFORMATION...  
**IGNORANCE IS A CHOICE**

- Concepten “data” en “informatie”
- Informatiebronnen
- Het Internet als informatiebron
- Adblock
- Betrouwbaarheid van bronnen
- Web of Trust
- “web 2.0”

<https://tinyurl.com/rapptor-om>



## Informatiebronnen



## Webbrowsers



- software aan clientzijde
- toegang tot het Internet
- bezoeken van websites
- downloaden van bronnen

The Pirate Bay - The galaxy's most resilient bittorrent site - Mozilla Firefox

File Edit View History Bookmarks Tools Help

The Pirate Bay - The gala... x

https://pirateproxy.tv/search/The Wi


The Witcher 3

Search Torrents | Browse Torrents | Recent Torrents | TV shows | Music | Top 100

The Witcher 3 Pirate Search

Audio Video Applications Games Porn Other All

Search results: The Witcher 3 Displaying hits from 0 to 30 (approx 218 found)



## WATCH LIVE ONLINE

<http://stream.me> Enter Here!

Type	Name (Order by: Uploaded, Size, ULed by, SE, LE)	View: Single / Double	SE	LE
Games (PC)	The Witcher 3: Wild Hunt (Patch 1.12) (GOG) Uploaded 01-12 06:20, Size 476.51 MiB, ULed by mercs215		232	13
Games (PC)	The Witcher 3 Wild Hunt-FIT Uploaded 05-19 2015, Size 22.74 GiB, ULed by extremezone		140	06
Games (PC)	The Witcher 3: Wild Hunt - Hearts of Stone (2.0.0.42) (GOG) Uploaded 01-12 06:21, Size 4.25 GiB, ULed by mercs215		134	19
Games (PC)	The Witcher 2: Assassins of Kings Enhanced Edition Repack Uploaded 05-18 2013, Size 10.83 GiB, ULed by NZupload		115	7
Games (PC)	The Witcher 3: Wild Hunt 16 DLC (2.0.0.41) (GOG) Uploaded 10-09 2015, Size 523.15 MiB, ULed by mercs215		88	1
Games (PC)	The Witcher 3: Wild Hunt - 16 DLC (2.0.0.42) (GOG) Uploaded 01-12 06:21, Size 523.22 MiB, ULed by mercs215		72	2
Games (PC)	The Witcher 3: Wild Hunt Patch v1.07 (GOG) Uploaded 07-18 2015, Size 2.04 GiB, ULed by mercs215		70	10
Games (PC)	The Witcher 3: Wild Hunt v1.05 update (GOG) Uploaded 05-05 2015, Size 282.6 MiB, ULed by mercs215		46	1
Games (PC)	The Witcher 3 Wild Hunt [Steam-Rip] Uploaded 05-20 2015, Size 29.16 GiB, ULed by OvaleKraj		45	7
Games (PC)	The Witcher Fantasy Edition Repack-R.G.Mechanics Uploaded 11-20 2014, Size 19.85 GiB, ULed by Taker009		43	11
Games (PC)	The Witcher Gold Edition (v1.5) (ENG/MULTI) RG Catalyst Uploaded 08-27 2013, Size 5.9 GiB, ULed by DMetLx		41	3
Audio (Music)	The Witcher 3 Wild Hunt Original Soundtrack Uploaded 05-23 2015, Size 736.04 MiB, ULed by Husain.87		26	9
Games (PC)	The Witcher 2 Assassins of Kings Enhanced Edition-SKIDROW Uploaded 04-17 2012, Size 14.99 GiB, ULed by extremezone		25	8
Games (PC)	The Witcher 3 Wild Hunt (1.04 Patch) (GOG) Uploaded 05-29 2015, Size 273.99 MiB, ULed by Sarah116		24	2
Games (PC)	The Witcher 2 Assassins of Kings-SKIDROW Uploaded 05-16 2011, Size 13.95 GiB, ULed by MAF7&&		22	7

Stream For Free! Chat For Free!  
Watch For Free!

Watch Live!

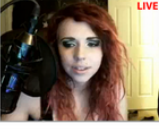


#leagueoflegends  
#worldofwarcraft  
#heroesofthestorm  
#callofduty  
#hearthstone  
#counterstrike

Stream.me Tags

#teamlanguage #working #schoolclass  
#highschoolbasketball #justforfun  
#partystream #teaching #liveconcert  
#guitarlessons #cooking

Stream what you want when you want.  
Share your talents LIVE!

#destiny  
#dota2  
#runescape  
#diablo  
#battlefieldhardline

Scripts Partially Allowed, 1/3 (pirateproxy.tv) | <SCRIPT>: 9 | <OBJECT>: 0 Options... x



## Adblocking



<https://addons.mozilla.org/en-US/firefox/addon/adblock-plus/>



<https://chrome.google.com/webstore/detail/gighmmpiobklfepjocnamgkkbiglidom?hl=en>



<https://addons.opera.com/en/extensions/details/opera-adblock/>

EEVblog #717 - How To Hack Vacuum Fluorescent Displays - YouTube - Mozilla Firefox

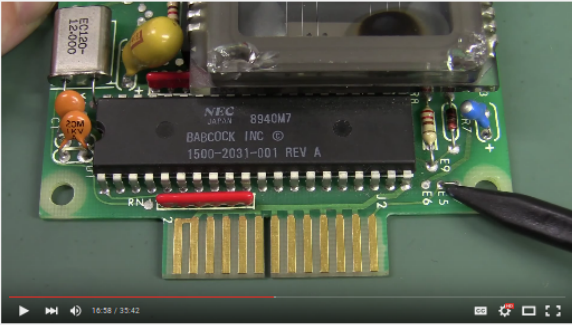
File Edit View History Bookmarks Tools Help

EEVblog #717 - How To H... x

https://www.youtube.com/watch?v=... C Search

A privacy reminder from YouTube, a Google company

YouTube



EEVblog #717 - How To Hack Vacuum Fluorescent Displays

EEVblog 325,135 subscribers 152,623 views

Published on Feb 23, 2015  
Dave explains what Vacuum Fluorescent Displays (VFDs) are, how they work, and then hacks an interface and reverse engineers a surplus Babcock VP-0240-7 display from an industrial machine to make it work with an Arduino.  
UPDATE: Found the datasheet: <http://www.eevblog.com/files/Babcock-...>  
Forum: <http://www.eevblog.com/forum/blog/eev-...>

Scripts Partially Allowed, 5/12 (youtube.com, google.com, gstatic.com, ytimg.com, googlevideo.com) | <SCRIPT>: 41 | <OBJECT>: 0

Options...

scarlet Trio

39€ /mois TV Internet Téléphonie fixe

REGARDEZ LA TV MOINS CHER

Up next

EEVblog #671 - White Van Speaker Scam Tear-down

EEVblog 338,871 views

EEVblog #722 - Mailbag

EEVblog

EEVblog #717 - How To Hack Vacuum Fluorescent Displays - YouTube - Mozilla Firefox

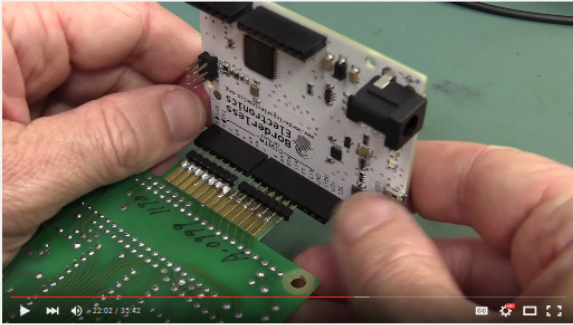
File Edit View History Bookmarks Tools Help

EEVblog #717 - How To H...

https://www.youtube.com/watch?v=...

A privacy reminder from YouTube, a Google company

YouTube



EEVblog #717 - How To Hack Vacuum Fluorescent Displays

EEVblog 325,135 subscribers 152,623 views

Published on Feb 23, 2015  
Dave explains what Vacuum Fluorescent Displays (VFDs) are, how they work, and then hacks an interface and reverse engineers a surplus Babcock VF-02407 display from an industrial machine to make it work with an Arduino.

UPDATE: Found the datasheet: <http://www.eevblog.com/files/Babcock-...>

Forum: <http://www.eevblog.com/forum/blog/eev-...>

Up next

- EEVblog #671 - White Van Speaker Scam Teardown 498,871 views
- EEVblog #722 - Mailbag 43,315 views
- EEVblog #703 - Dumpster Plasma TV Bad Cap Repair 180,584 views
- EEVblog #658 - Mailbag 122,538 views
- EEVblog #689 - Back To The Future Time Circuits Troubleshooting 43,000 views

Scripts Partially Allowed, 5/8 (youtube.com, google.com, gstatic.com, yimg.com, googlevideo.com) | <SCRIPT>: 29 | <OBJECT>: 0

Options...

# Google

HISTORY OF ARCADES

I KNOW WHAT YOU WANT! HERE'S THE WIKIPEDIA ARTICLE ON ARCADE HISTORY.



# bing

HISTORY OF ARCADES

LOOK HOW COOL THIS INTERACTIVE MAP OF PERU IS.

LOVE ME.



## Search query tuning



### How To Google It

**site:**

Only searches the pages of that site.

“ ”

Searches for the exact phrase, not each of the words separately.

-

Excludes this term from the search.

**site:nytimes.com ~college “test scores” -SATs 2008..2010**

~

Will also search related words, such as 'higher education' and 'university'.

..

Shows all results from within the designated timerange.

## Het (wetenschappelijke) internet



WIKIPEDIA



## Wetenschappelijke search engines



- wetenschappelijke publicaties
- referenties en citaten
- zeer betrouwbaar
- gebruik in combinatie met Wikipedia

## Encyclopediae



WIKIPEDIA



- samenvatting van kennis
- secundaire bron
- geeft toegang tot goede primaire bronnen
- weinig kwaliteitscontrole
- dynamisch

Despite CIGS having the advantage over CdTe, which is negatively affected by the issues of both heavy metal cadmium usage and rare earth telluride availability, the development of the CIGS lags behind CdTe commercially. In the laboratory, 18.7% efficiency on a flexible medium was achieved with CIGS cells,<sup>[36]</sup> though it remains to be seen how well mass production values can be achieved with any CIGS cell. In Berlin, Germany, commercial production of flexible CIGS cells has begun, after initial production runs, on an annual 35MW capable facility.<sup>[37]</sup>

**See also** [\[edit\]](#)

- CZTS

**References** [\[edit\]](#)

- ↑ Thin-Film wins PV market share: Three New Plants in Germany Total Almost 50 MW  Sustainableenergyworld.eu (2009-03-14). Retrieved on 2011-09-13.
- ↑ Tinoco, T.; Rincón, C.; Quintero, M.; Pérez, G. Sánchez (1991). "Phase Diagram and Optical Energy Gaps for CulnyGa1−ySe2 Alloys". *Physica Status Solidi (a)* **124** (2): 427. Bibcode:1991PSSAR.124..427T . doi:10.1002/pssa.2211240206 .
- ↑ <sup>a</sup> <sup>b</sup> <sup>c</sup> <sup>d</sup> Stanbery, B. J. (2002). "Copper Indium Selenides and Related Materials for Photovoltaic Devices". *Critical Reviews in Solid State and Materials Science* **27** (2): 73. doi:10.1080/20014091104215 .
- ↑ Repins, I.; Contreras, Miguel A.; Egaas, Brian; Dehart, Clay; Scharf, John; Perkins, Craig L.; To, Bobby; Noufi, Rommel (2008). "19.9%-efficient ZnO/CdS/CuInGaSe2 solar cell with 81.2% fill factor". *Progress in Photovoltaics: Research and applications* **16** (3): 235. doi:10.1002/ppiv.822 .
- ↑ ZSW: Press Releases  Zsw-bw.de. Retrieved on 2011-09-13.
- ↑ Hedström J., Ohlsen H., Bodegard M., Kylvner A., Stolt L., Hariskos D., Ruckh M., Schock H.W. (1993). "ZnO/CdS/Cu(In,Ga)Se2 thin film solar cells with improved performance". *Proceedings of 23rd IEEE Photovoltaic Specialists Conference*: 364–371. doi:10.1109/PVSC.1993.347154 . ISBN 0-7803-1220-1.
- ↑ Kronik L., Cahen D., Schock H.W. (1998). "Effects of sodium on polycrystalline Cu(In,Ga)Se2 and its solar cell performance". *Advanced Materials* **10**: 31–36. doi:10.1002/(SICI)1521-4095(199801)10:1<31::AID-ADMA31>3.0.CO;2-3 .
- ↑ "First sales for 'world's cheapest solar cells'"  Chemistry world February 2008. Retrieved 6 April 2011.
- ↑ "Process for making solar cells"  United States Patent Application 20090223551. 2009-10-09. Retrieved 10 February 2011.
- ↑ Young, D. L.; Keane, James; Duda, Anna; Abushama, Jehad A. M.; Perkins, Craig L.; Romero, Manuel; Noufi, Rommel (2003). "Improved performance in ZnO/CdS/CuGaSe2 thin-film solar cells". *Progress in Photovoltaics: Research and Applications* **11** (8): 535. doi:10.1002/ppiv.516 .
- ↑ <sup>a</sup> <sup>b</sup> "Polycrystalline Thin Film Solar Cell Technologies"  National Renewable Energy Laboratory Colorado U.S.A. Retrieved 10 February 2011.
- ↑ "Degradation of ZnO Window Layer for CIGS by Damp-Heat Exposure"  National Renewable Energy Laboratory August 2008. Retrieved 10 February 2011.
- ↑ <sup>a</sup> <sup>b</sup> <sup>c</sup> <sup>d</sup> <sup>e</sup> <sup>f</sup> <sup>g</sup> <sup>h</sup> Kemell, Marianna; Ritala, Mikko; Leskelä, Markku (2005). "Thin Film Deposition Methods for CuInSe2 Solar Cells". *Critical Reviews in Solid State and Materials Sciences* **30**: 1. Bibcode:2005CRSSM...30...1K . doi:10.1080/10408430590918341 .
- ↑ Ihlal, A; Bouabid, K; Soubane, D; Nya, M; Aittalebali, O; Amira, Y; Outzourhit, A; Nouet, G (2007). "Comparative study of sputtered and electrodeposited Cl(S,Se) and CIGSe thin films". *Thin Solid Films* **515** (15): 5852. Bibcode:2007TSF...515.5852I . doi:10.1016/j.tsf.2006.12.136 .
- ↑ <sup>a</sup> <sup>b</sup> <sup>c</sup> <sup>d</sup> Repins, I. L.; Stanbery, B. J.; Young, D. L.; Li, S. S.; Metzger, W. K.; Perkins, C. L.; Shafarman, W. N.; Beck, M. E. et al. (2006). "Comparison of device performance and measured transport

## Patentdatabases



[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [more »](#)

Search over 7 million patents.

- uitvindingen
- zeer gedetailleerd
- statisch
- soms moeilijk leesbaar
- relatief betrouwbaar

## Knowledge engines



- kwantiseerbare data
- ideaal voor vergelijkingen
- bewerkingen op datasets
- secundaire bron
- oorsprong data onbekend

## Tijdschriften (journals)



- wetenschappelijke publicaties
- peer reviewed
- gedetailleerde informatie
- zeer betrouwbaar
- vaak primaire bronnen

## Kranten en nieuwswebsites

WALL STREET JOURNAL

THE  
HUFFINGTON  
POST

CNN

- verzamelen nieuws
- feiten maar ook geruchten
- interpretatie door journalisten
- secundaire bron



## White papers, datasheets en info graphics



- ongeverifieerde publicaties
- weinig of geen wetenschappelijke ondersteuning
- subjectief
- soms dicht bij reclame

# THORIUM

Well Home  
Empower the equator, first!

Thorium is named after Thor, the Norse god of thunder

**HISTORY**

**1960-70s**  
Prototype MSR (Molten Salt Reactors) were developed and tested by the United States at the Oak Ridge National Laboratories.

Based on MSR (Molten Salt Reactor) technology, an experimental reactor was built to study using thorium-fluoride salt kept hot enough to be liquid, allowing for the elimination of the costly fabrication of fuel rods.

**232Th+233U**  
This experimental reactor became a part of the MSRE (Molten-Salt Reactor Experiment) that used 232Th as the fertile material and 233U as the fissile fuel.

✓ It operated successfully for about five years.

**WHAT IS IT?**  
Thorium is a chemical element

Atomic Number → 90  
Chemical Symbol → Th  
THORIUM

**90 Electrons**  
Four of its electrons are valence electrons

**90 Protons**

**THORIUM 232**  
In nature, thorium is found in the isotope Thorium 232 and decays slowly by emitting alpha particles

**14.05 BILLION YRS**  
The half life of Thorium 232 is 14.05 billion years

**1828**  
Thorium was discovered in 1828 by Jons Jakob Berzelius

Thorium naturally occurs on earth and is slightly radioactive in its natural form

You could carry a small amount in your pocket without harm

**HOW IT WORKS**  
The greatest interest in thorium is in its ability

## Image boards en fora



- vluchtige info
- persoonlijke mening van auteurs
- geen kwaliteitscontrole
- spam & trolls
- moeilijk te doorzoeken



- persoonlijke mening van auteurs
- geen peer review
- rijk aan onzin
- veel foutieve info
- kan zowel primaire als secundaire bron zijn

## Social networks



- geen kwaliteitscontrole
- interessante info quasi onbestaande
- tijdverspilling
- lage SNR
- intellectuele riool van het Internet

# Social Media

## Explained with Donuts



**TWITTER** I'm eating a #donut

**FACEBOOK** I like donuts

**FOURSQUARE** This is where I eat donuts

**INSTAGRAM** Here's a crappy photo of my donut

**YOUTUBE** Watch me eat a dozen donuts

**LINKEDIN** My skills include donut eating

**PINTEREST** Here's a wedding cake made of donuts

**LAST-FM** Now listening to "donut pimpin"

**GOOGLE+** I'm a Google employee who eats donuts

**Waar zoek je naar volgende informatie?**

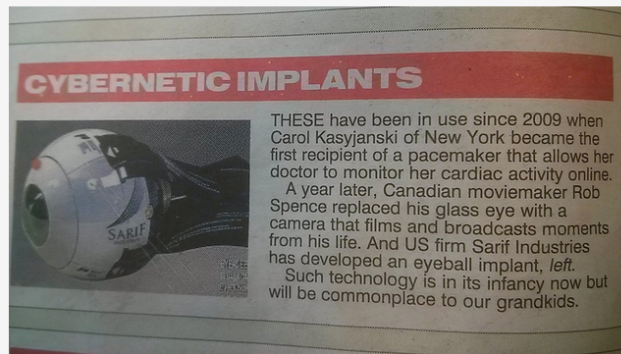
- versterkingsfactor van een BC547-transistor
- gemiddelde afstand tussen zon en venus
- integraal van  $f(x) = 7x \cos(x)$
- wereldproductie saffraan in 2010
- locatie van diepste boorput ter wereld
- chemische samenstelling van torberniet
- aantal afleveringen van Mythbusters
- elektrische lading van een proton
- schakeling voor een differentiaalversterker
- massapercentage Bi in  $\text{Bi}_2\text{Te}_3$



# Betrouwbaarheidsschaal



## British Newspaper Mistakes *Deus Ex* For Real Life



Maybe one day, we'll all have cybernetic eyeball implants that will grant us perfect 20/20 vision and allow us to be monitored by the government agency of our choice. Sadly, as *The Sun's* editors will probably find out soon, today is not that day.

Sarif Industries, the "US firm" mentioned in this recent edition of the British tabloid, is actually a fictional company in the video game *Deus Ex: Human Revolution*. That sweet cyborg eyeball image? Also from the video game. At least Rob Spence and Carol Kasyjanski are real.

Granted, the folks behind *The Sun* don't really care that much about nonsense like "accuracy" or "making sure the news they report isn't actually from a video game." And yes, perhaps eyeball implants will indeed be common in 50 years. But they probably won't come from Sarif Industries.



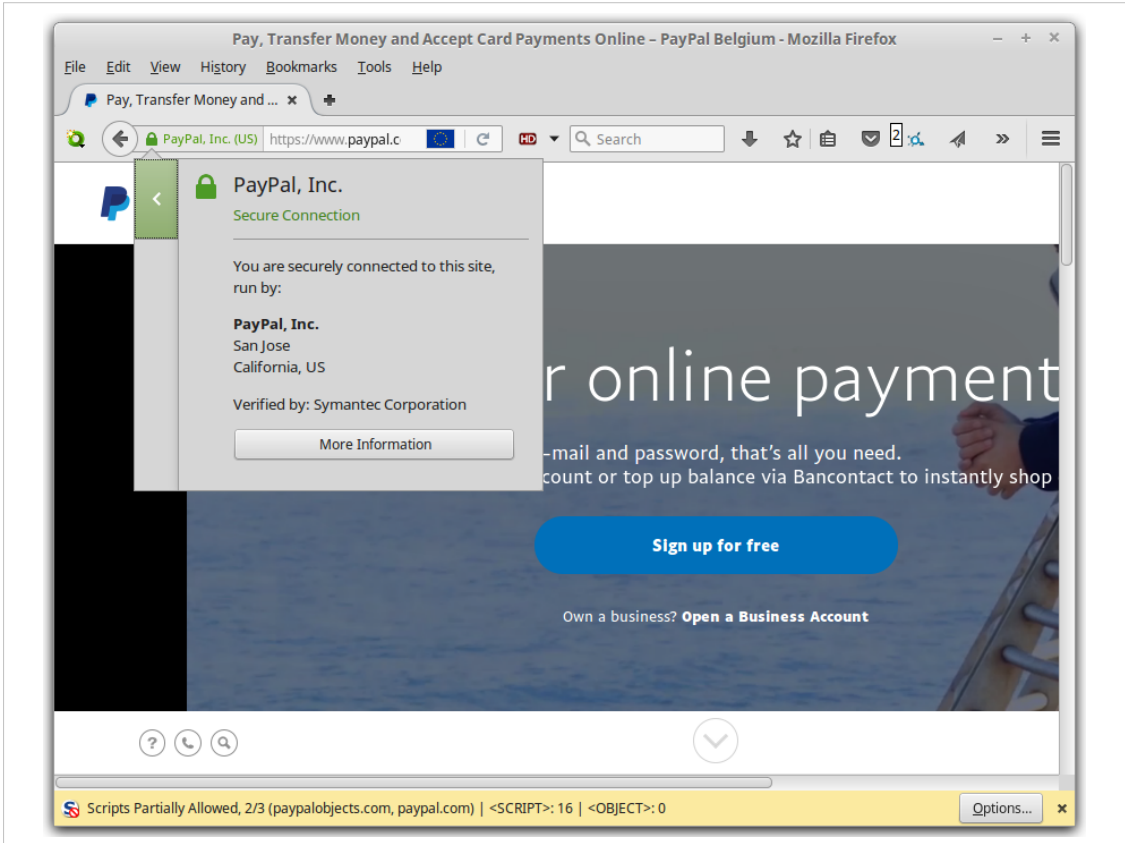


GAMING

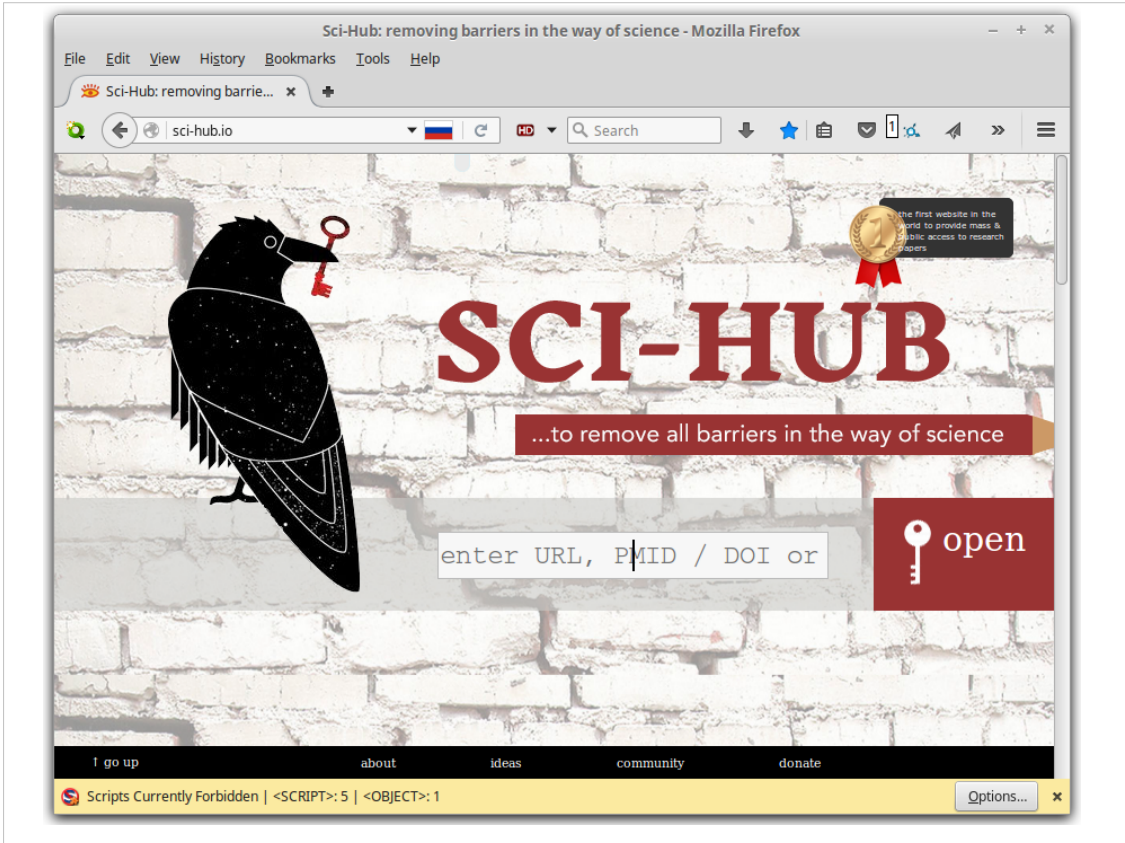
Image Source: Fallout

**CNN uses screenshot from 'Fallout 4' to show how Russians hack things**









# Het "web 2.0" probleem

## WOT Reputation Scorecard facebook.com

The screenshot shows the WOT Reputation Scorecard for facebook.com. On the left, there is a small thumbnail of the Facebook website and a description. The main section, titled 'Ratings', lists four categories: Trustworthiness (90), Vendor reliability (90), Privacy (83), and Child Safety (85). Each category has a green circle icon, a row of five human icons, and a horizontal bar chart showing the score. The 'Privacy' row is circled in red. Below the ratings, there are links to 'See owner at whois Domain Tools' and 'Discover similar sites'.

**facebook.com**  
Description:  
Popularity:   
Ranking: 1 [View ranking list](#)  
Server location:

[See owner at whois Domain Tools](#)  
[Discover similar sites](#)

### Ratings

Reputation ratings are based on real user ratings and they tell you how much other users trust this site. How reliable are the ratings? [Rate this website](#)

Category	Score	Quality
Trustworthiness	90	Excellent
Vendor reliability	90	Excellent
Privacy	83	Excellent
Child Safety	85	Excellent

Bron: <http://www.mywot.com/en/scorecard/facebook.com>

YouTube

### How to Recharge Batteries

infinitesolutions  13 videos ▾



0:07 / 2:04

2,108,317

Uploaded by [infinitesolutions](#) on Jan 31, 2007

5,755 likes, 1,473 dislikes


As Seen On:  
[Yahoo! Answers: Consu...](#)


The right kind of batteries are never around when you need them. I'm Mark Erickson, and this is Infinite Solutions: Home Edition. In this episode, I'll show you how to recharge dead batteries using other types of batteries that still carry a charge.

Bron: <http://www.youtube.com/watch?v=brdmnUBAS00>

Ask

**Why is the moon black and white in all photos?**  
Other planets pictures are in color, and yet the moon is in black and white.  
Andrei Serban 2 years ago [Report Abuse](#)

**Best Answer** - Chosen by Asker  
 There's very little to give the moon any color. Much of the surface is basalt, which is grey. Almost half the surface chemical composition is silica, which is colorless, followed by aluminum oxide, also colorless. But there are lesser amounts of other materials which give it slight variations in hues, although a little below our color threshold.  
Betelgeu... 2 years ago [Report Abuse](#)

 the moon is actually made out of black and white cheese. this is the reasoning of the color.  
blazedan... 2 years ago [Report Abuse](#)

Bron: <http://answers.yahoo.com/question/index?qid=20101112003431AAsTE2g>

## Opgave

Rangschik volgende websites volgens betrouwbaarheid:

- <http://avaaz.org>
- <http://www.deredactie.be>
- <http://www.wwf.org.au>
- <http://www.thalys.com>
- <https://plus.google.com>
- <http://www.nist.gov>
- <http://www.linear.com>
- <http://web.mit.edu>
- <http://powermems2013.org>

## Onderzoeksopdracht

### Deel I: onderzoekspaper

- individuele onderwerpenlijst: <https://tinyurl.com/om-subjects>
- **5 bladzijden, Liberation Serif, 12pt**, doorlopende tekst
- nadruk op wetenschappelijke schrijfstijl en bronvermelding en taal
- **Deadline: 31 maart 2017**, in te leveren: PDF via Pointcarré

### Deel II: presentatie

- individuele presentatie over jouw onderwerp
- max. 20 slides, max. 10 minuten
- datum & planning volgen later

Onderwerpen voor de onderzoeksopdracht  
Wetenschappelijk Schrijven voor het WPO  
Onderzoeksmethodologie.

De eerste letter van je familienaam bepaalt welk  
onderwerp aan jou wordt toegewezen.