

Anne Veling, gotoAMS, Oct 14<sup>th</sup> 2011

@anneveling

### Found 25 slides on Beyond Faceting

- Who? [o]
- Where? [5]
- Why? [1]
- What? [2]
- How? [10]



# facets are everywhere

#### Alles

Afbeeldingen

Maps

Video's

Nieuws

Shopping

Boeken

Meer

#### Hoorn

Locatie wijzigen

#### Internet

Pagina's geschreven in het Nederlands Pagina's uit Nederland Vertaalde buitenlandse pagina's

#### Facet - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Facet - Vertaal deze pagina [+1]

Spring naar The faceting machine: This machine uses a motor-driven plate to hold a precisely flat disk (known as a "lap"for the purpose of cutting or ...

Facet arrangements - Cutting facets - See also - References

### Faceted search - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Faceted\_search - Vertaal deze pagina +1

Ul's for Faceted Navigation by Marti Hearst; Apache Solr - An Apache Lucene ...

★ Meer resultaten van wikipedia.org weergeven

#### United States Faceters Guild faceting faceters gemstones

www.usfacetersguild.org/ - Vertaal deze pagina +1

Focuses on the art and skill of faceting gemstones for all skill levels.

### Faceting Rough Catalog - Amethyst Ametrine Aquamarine Citrine ...

www.facetingrough.com/ - Vertaal deze pagina +1

We only sell the finest quality, hand-picked **faceting** rough. Unless otherwise noted, all the **faceting** rough on our website is flawless, with the possible exception ...

### The World's Most Inexpensive Faceting Machine - YouTube



www.youtube.com/watch?v=1\_fmqWBBUdk [+1] 31 juli 2008 - 4 min - Geüpload door jeriwykoff

Don't laugh! Template Faceters - which you can easily make for under

#### **New Releases**

Last 90 days (2)

#### Department

Any Department

#### Books

Arts & Photography (7)

Home & Garden (17)

Reference (4)

History (2)

Professional & Technical (30)

Science (30)

Computers & Internet (5)

Outdoors & Nature (4)

Children's Books (1)

Entertainment (1)

Nonfiction (2)

Religion & Spirituality (2)

Sports (1)

Medicine (1)

Health, Mind & Body (1)

Literature & Fiction (1)

Travel (1)

#### Format

- Paperback (49)
- Hardcover (40)

#### Author

W. R. C. Shedenhelm (2)

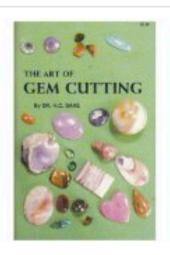
### Books > "faceting"

Showing 1 - 12 of 114 Results

#### Format

Paperback (49) Hardcover (40)

1.



### The Art of Gem Cutting: Including Cabocho

★★★☆ ✓ (11 customer reviews)

Formats Buy new

### Paperback

Order in the next 4 hours to get it by Thursday, Oct 13. Only 12 left in stock - order soon.

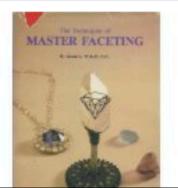
\$6.00

Only 12 left in Stock - order soon.

Eligible for FREE Super Saver Shipping.

Sell this back for an Amazon.com Gift Card

2.



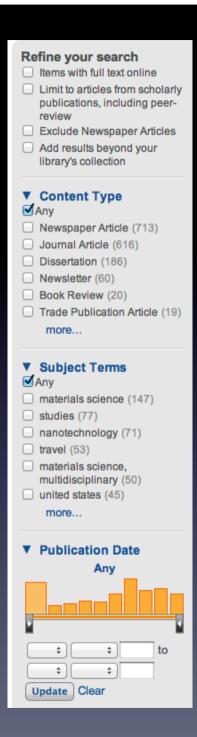
### Techniques of Master Faceting by Gerald L.

Formats Buy new

#### Hardcover

Some formats eligible for **FREE** Super Saver Shipping.

Sell this back for an Amazon.com Gift Card



Subject Terms ×		
Include	Exclude	Sort by: (#)   A-Z
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		materials science (147)
		studies (77)
		nanotechnology (71)
		travel (53)
		materials science, multidisciplinary (50)
		united states (45)
		research (42)
		universities and colleges (33)
		metallurgy & metallurgical engineering (32)
		chemistry (28)
		precious stones (28)
		sports training (28)
		art exhibits (26)
		support groups (25)
		jewelry (24)
		motion pictures (24)
		condensation (22)
	_	U 0::ki (04)
		Continue

# facets today

- Driven by technology
- If you can, doesn't mean you should

Visualized as lists of texts with count poring



## why

- Give overview of the set
  - What am I looking at?
- Assist with zooming in
  - Ah, but I only want these...

### how to use facets: 1

- Use faceting to
  - Select facet dimension with highest discriminatory value
  - Ask questions back to the user
- Prototype for idealenkompas.nl
- Useful for highly faceted content



Home Hoe werkt het?

Geld zoeken

Achter de schermen

### Wie is je doelgroep?

vrouwen + mannen + kinderen + ouderen + pubers + ouders + volwassenen + immigranten + gehandicapten + gezinnen + alleenstaanden + zieken + minderheden + veteranen + beroepsgroepen + slachtoffers + vrijwilligers + sporters + aidspatienten+ kankerpatienten + spierzieken + hiv-positief + terminale altzheimer+ patienten + lepra +

### Wat is de leeftijd van je doelgroep?



< vorige volgende >

Aantal regelingen:

1841

Toon zoekresultaat

Welk thema past bij je plan?

gezondheid x natuur x

landbouw x

welzijn x

milieu x

religie x

Wie is je doelgroep?

zieken x

Waar vindt het project plaats?

Wat gaat het plan kosten?

Hoe lang duurt je project?

Type initiatief

Wie vraagt het geld aan?



### how to use facets: 2

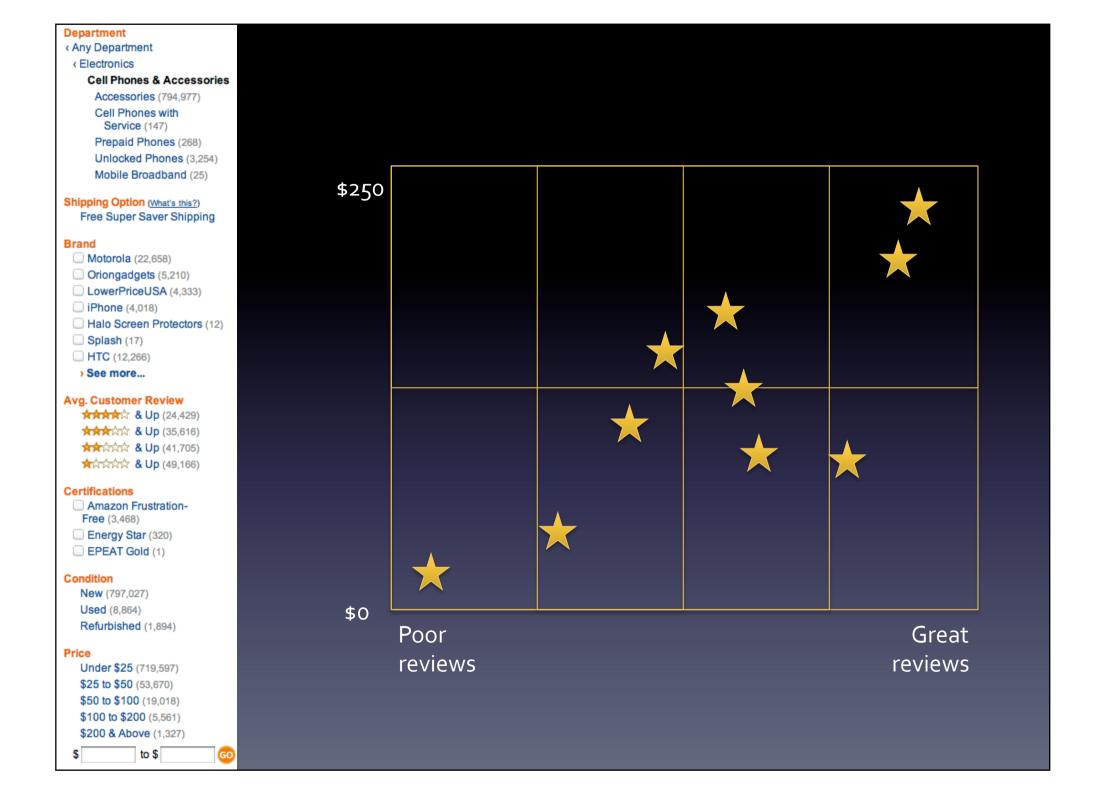
Tag Cloud facets

agile amsterdam apache application architecture break build cloud com conference contact data dave design development events free goto gotocon hadoop independent international introduction jaoo kirk language lean martin michael millions pressure process program project room rough save schedule search simon software solution Speaker sponsor Subject topic track training vendor web

#### Department Any Department Electronics Cell Phones & Accessories Accessories (794,977) Cell Phones with Service (147) Prepaid Phones (268) Unlocked Phones (3,254) Mobile Broadband (25) Shipping Option (What's this?) Free Super Saver Shipping Brand Motorola (22,658) Oriongadgets (5,210) LowerPriceUSA (4,333) iPhone (4,018) Halo Screen Protectors (12) Splash (17) HTC (12,266) > See more... Avg. Customer Review ★★★☆ & Up (24,429) \*\*\* & Up (35,616) **ጵጵ**ስስስል & Up (41,705) ★ሕሕሕሕ & Up (49,166) Certifications Amazon Frustration-Free (3,468) Energy Star (320) EPEAT Gold (1) Condition New (797,027) Used (8,864) Refurbished (1,894) Price Under \$25 (719,597) \$25 to \$50 (53,670) \$50 to \$100 (19,018) \$100 to \$200 (5,561) \$200 & Above (1,327) to \$ 60

### Venn facets

accessories prepaid phones Motorola



### how to use facets: 3

Use faceting to fuel a heatmap



VOL. XI-NO. 3236.

NEW-YORK, WEDNESDAY, FEBRUARY 5, 1862.

NEWS FROM WASHINGTON.

THE FINANCES OF THE GOVERNMENT.

Provision for Paying the Interest on the Three Year Bonds in Coin.

Further Debate on the Treasury Note

have no armaments sufficient to resist. The boat, ordered by the House might have been almost fin sehed, and would have enabled us to bid defiance to treading flocis. Senator Hazz has delayed the bill by his quarrel with Wattes about Musean's seventy thousand dollars, and the Maine Sensiors delay it because they want wooden stops built of Maine lumber. But all these Senators denounce the Administration and army for not fighting.

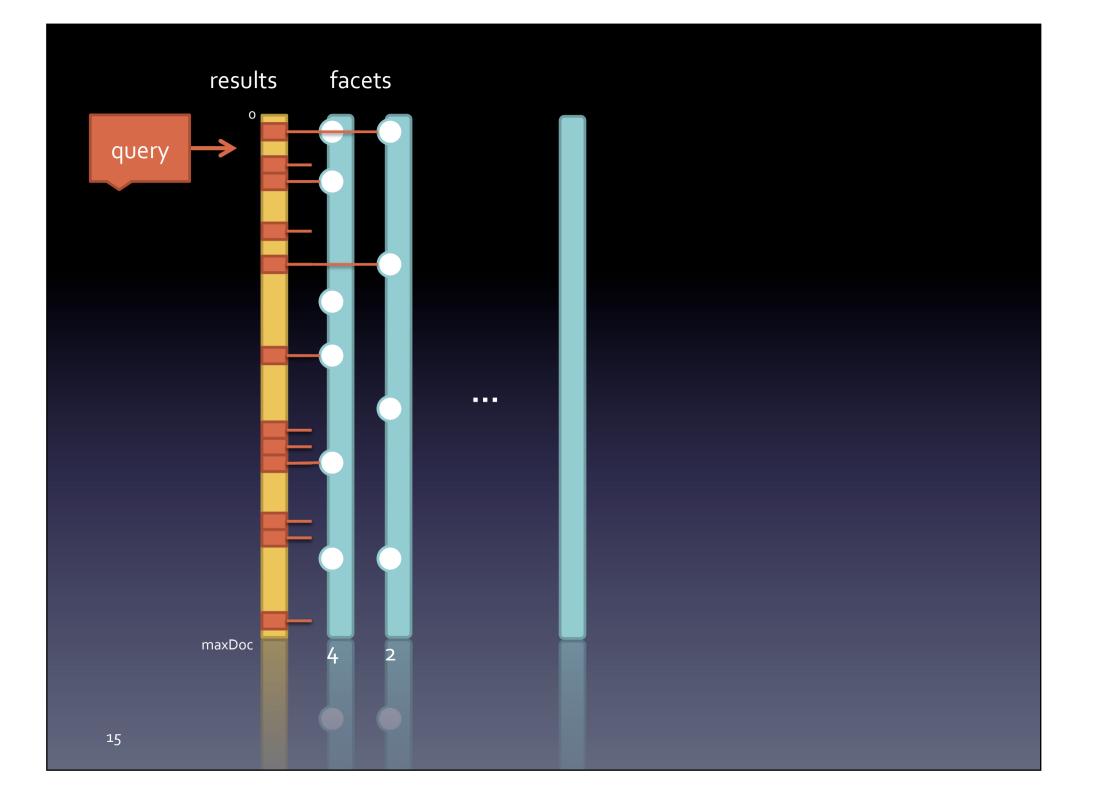
GEN. LANE AND GON, HUNTRE. This evening, Mr. Wage, from Leavenworth, arrived here with letters from Gen. Lasa for the President and several Sensions and Congressmen. It ap-

they would hear him (Hala) on the report of the Naval Geneature in organ to the Secretary of the Naval Geneature in organ to the Secretary of the Navay. He hepped the Sensie would puss the bits of age, but it suffered supple pussually in a gred, it of for continuousless it is the official state of the continuousless it is the official state of the continuousless it is the organical terms.

Mr. Meanna of Maine, (Rep.,) said that to buil proposed to belid treatly iron-clad stansars. This style of awal architecture was my et entirely an ex-periment. France and England are trying it as an experiment. The British Board of Admirally had syme or axval accusioncine was any of empiricy an ex-periment. Process and Regland ane trying its at an in these words, an sect of suspensionable delinyality are provided on a control to the state of the state of the state of the state of the state dendrid experiment. There were no roffing suits to the controly that could do the words, and probably, and of professionals. Hence we word of the state of the

be built in free mentlet. They were strongly recom-nanced by the Encouries Regardment and Secretary

not long, but it afforded ample ground for re-gret, if not for condemnation. It showed offensively the same spirit which is found in the offginal leater; nor did it suggest anything in spology, except that the bearer of the letter was his life-long friend and that when he wrote the letter he did not dream of war;



query

# performance

- Facet initialization
  - Takes ~1.5minute
  - Cached

- Facet evaluation
  - Runtime!
  - #docs x #facets

### Proquest Zoom

- Visualization of historic New York Times
  - 58k newspapers
  - Since 1852
- Tiling engine to create tiles
- Front-end created by Q<sub>42</sub>



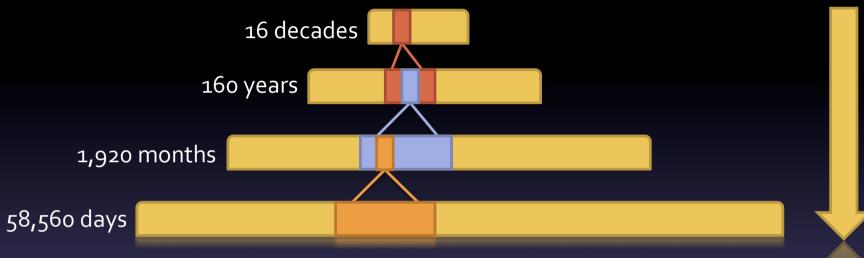




# challenges

- Tiling engine
  - Single 512 Gpixel virtual canvas
  - 3M tiles in 11 layers: ~100Gb
  - Java Graphics font limitation for 26,000 font size
- Solr index
  - 25M articles, 867M index
  - Storing nothing, only indexed
- Solr Native faceting too slow
  - Runtime faceting optimizations

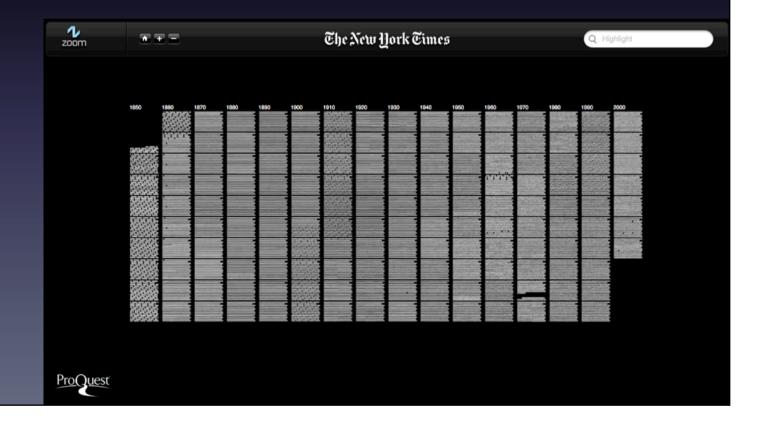
## runtime facet optimization



- 60,656 facets
- Worst case facet #DocSet.exists(doc)
  - Originally:  $25M \times 60k = 1.5E12$  checks, 60k per doc
  - Now: average o.5x for each level = 34.5 per doc

# show us or it didn't happen

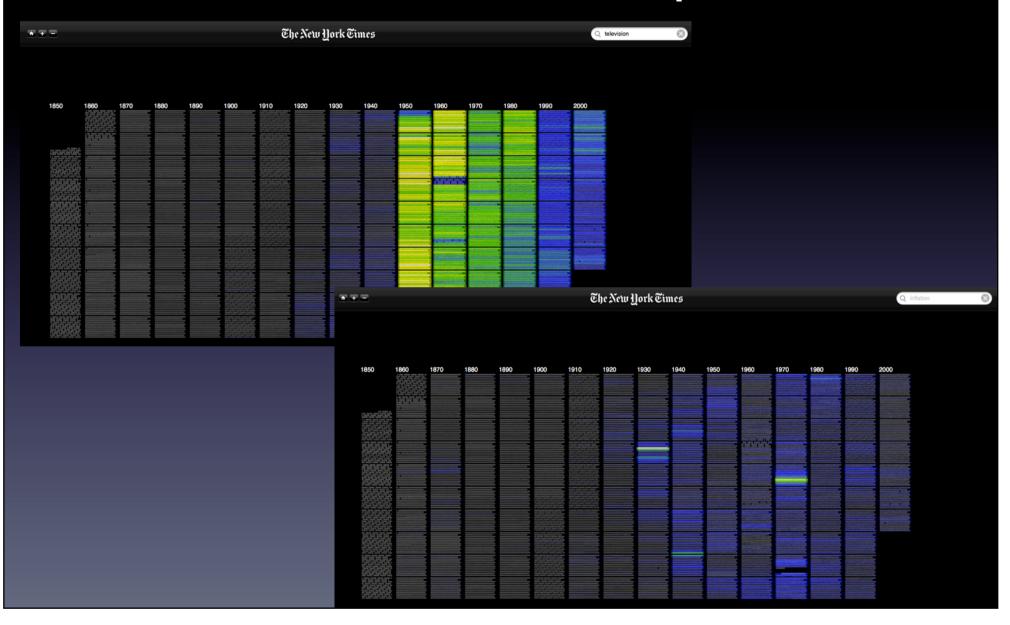
- Web Application
- iPad App



### zooming



# facet heatmap



# finally

- Zoom application not yet live
- Technology is fast enough
  - Cheap to compute many facets
- Think about how to visualize based on
  - helping a user zoom in?
  - helping a user get overview?



# thank you



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