Semantic Web Technologies II

SS 2009

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Semantic Web 2.0 - Übung

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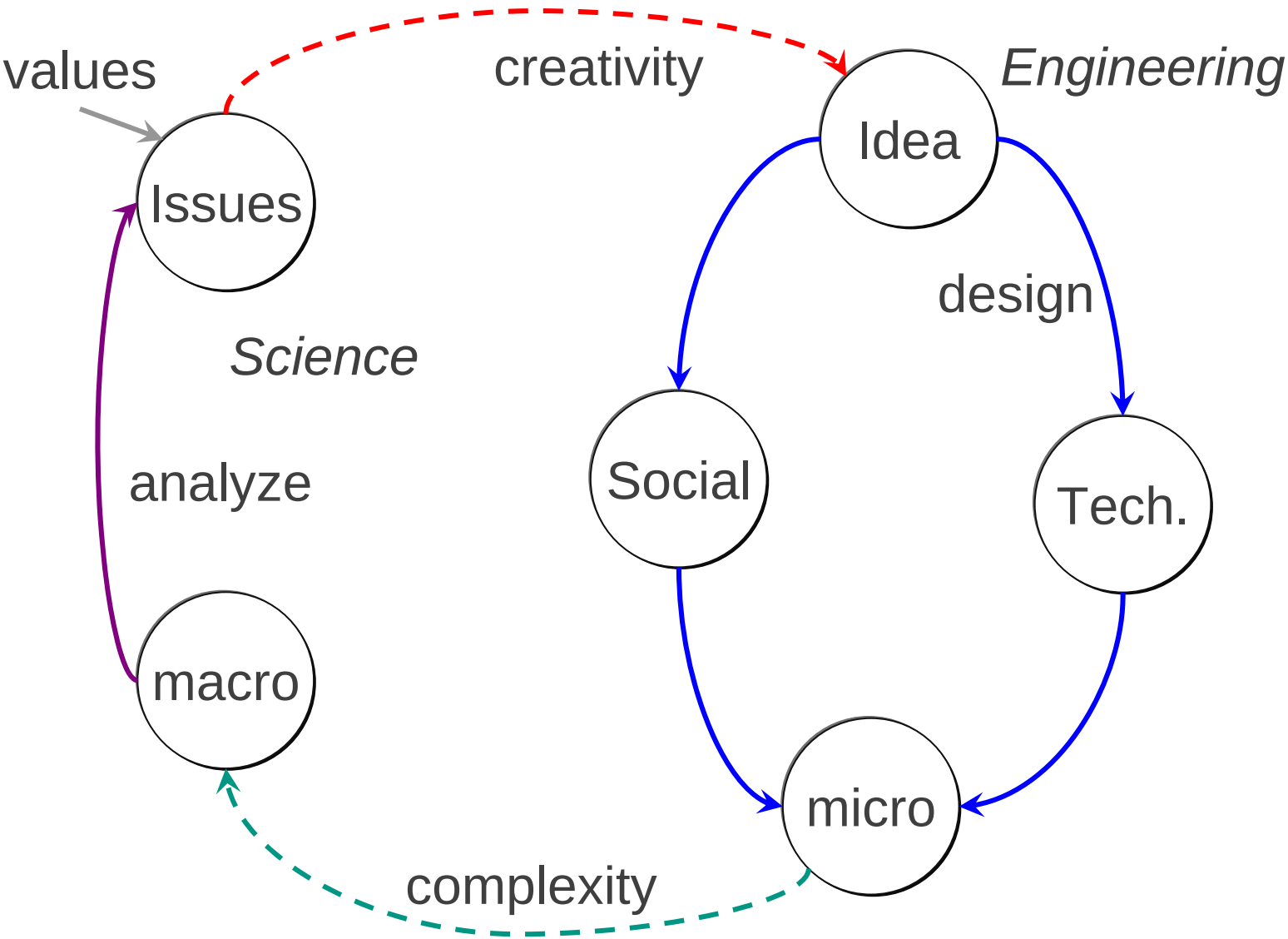
Semantic Web

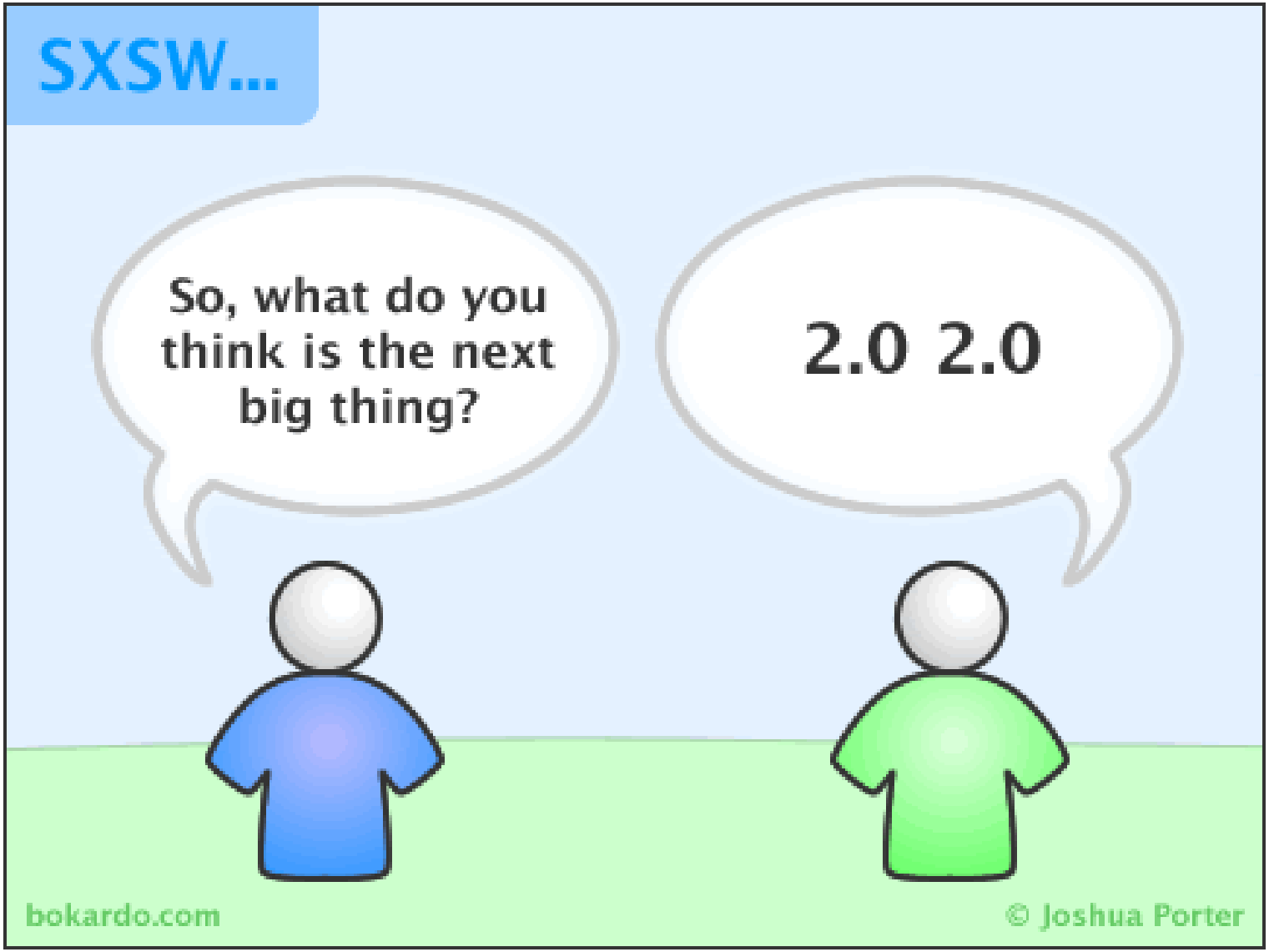
Semantic Web

- case studies in closed domains
- complex & comprehensive modeling
- team of knowledge engineers
- sophisticated reasoning
- unwieldy tools and obscure specifications

Web Science Process Model



Semantic Web 2.0


SXSW...
So, what do you think is the next big thing?
2.0 2.0
bokardo.com
© Joshua Porter

Semantic Web + Web 2.0 = Web 3.0?

	Web 2.0	Web 3.0
Tagging	▪ annotieren mit **ambigen** Stichwörtern ▪ Singular/Plural-Problem ▪ Synonyme ▪ Keinerlei Intelligenz	▪ annotieren mit **eindeutigen** Stichwörtern ▪ Inferenz (Tag „Hund“ folgert Tag „Tier“)
Mashups	▪ Mashups vorab von Hand programmiert	▪ Spontan durch End-Nutzer (siehe Piggybank)
Suche	▪ Stichwortsuche oder Tag-Suche *findet* Dokumente	▪ Strukturierte Suche kombiniert Daten und *erzeugt* Dokumente
Zeithorizont	▪ 2004 - 2008	▪ 2008 – 2012

Semantic Web of Data

- A World Wide Web (of data)
- Bottom-up, user-centred approach
- “A little semantics goes a long way”

Semantic Web Application

- Nicht notwendig: RDF Backend
  - Implementierung ist irrelevant
  - Kann aber auch RDF-basiert sein – Joost
- Wichtig: Schnittstellen nach außen
  - RDF
  - SPARQL
  - Datenaustausch
- Nicht sein sondern schein

Beispiele

Taaable

Ingredients

I want: orange ?

I don't want: ?

Type of dish

I want: pie ?

I don't want: ?

More options

☐ Vegetarian ☐ Nut-free ☐ No alcohol *Advanced Configuration ?*

Find recipes! | Get 5! | Reset query

Your request: orange D:pie

Common path: 1<citrus_fruit --> orange>

Common cost: 1.3778748590755354

#	Original recipe name	Adaptation overview	I like/I don't like
1	Apple Crumble Pie	Replace: lemon_juice by citrus_fruit	I don't like it !
2	Delicious Key Lime Pie	Replace: key_lime_juice by citrus_fruit, key_lime_peel by citrus_fruit	I like it !
3	Key Lime Pie	Replace: key_lime by citrus_fruit, key_lime_juice by citrus_fruit	I like it !
4	Strawberry Lime Pie	Replace: lime by citrus_fruit	I don't know
5	UPSIDE DOWN APPLE PIE	Replace: lemon_juice by citrus_fruit	I don't know

Results 1 - 5 on 5 | Processing time: 0.0141 secondes

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Taaable

navigation
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Apple pancakes from the townships

Ingredients [edit]

- 1 ts Cinnamon category:cinnamon (1, tsp, ?, ?, ?)
- 2 Eggs category:egg (2, ?, ?, ?, ?)
- 2 c Flour; all purpose category:all-purpose_flour (2, c, ?, ?, ?)
- 1 tb Baking powder category:baking_powder (1, tblsp, ?, ?, ?)
- 1 ts Baking soda Salt category:baking_soda (1, tsp, ?, ?, ?)
- 3 tb Sugar category:granulated_sugar (3, tblsp, ?, ?, ?)
- 2 1/4 c Sour milk or buttermilk milk category:buttermilk_or_milk_or_sour_milk (2 1/4, c, ?, ?, ?)
- 1 c Apples;unpeeled, cut in pieces category:apple (1, c, unpeeled,cut,piece, ?, in)
- 6 tb Butter; melted category:butter (6, tblsp, melt, ?, ?)

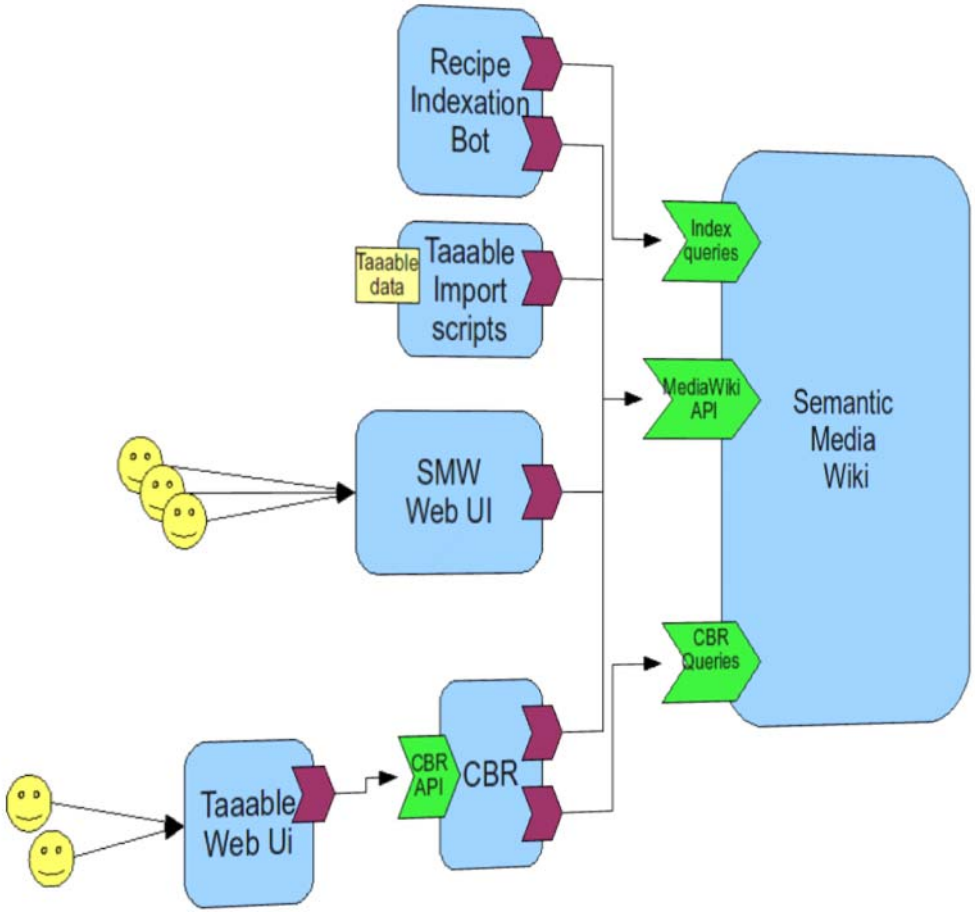
Preparation [edit]

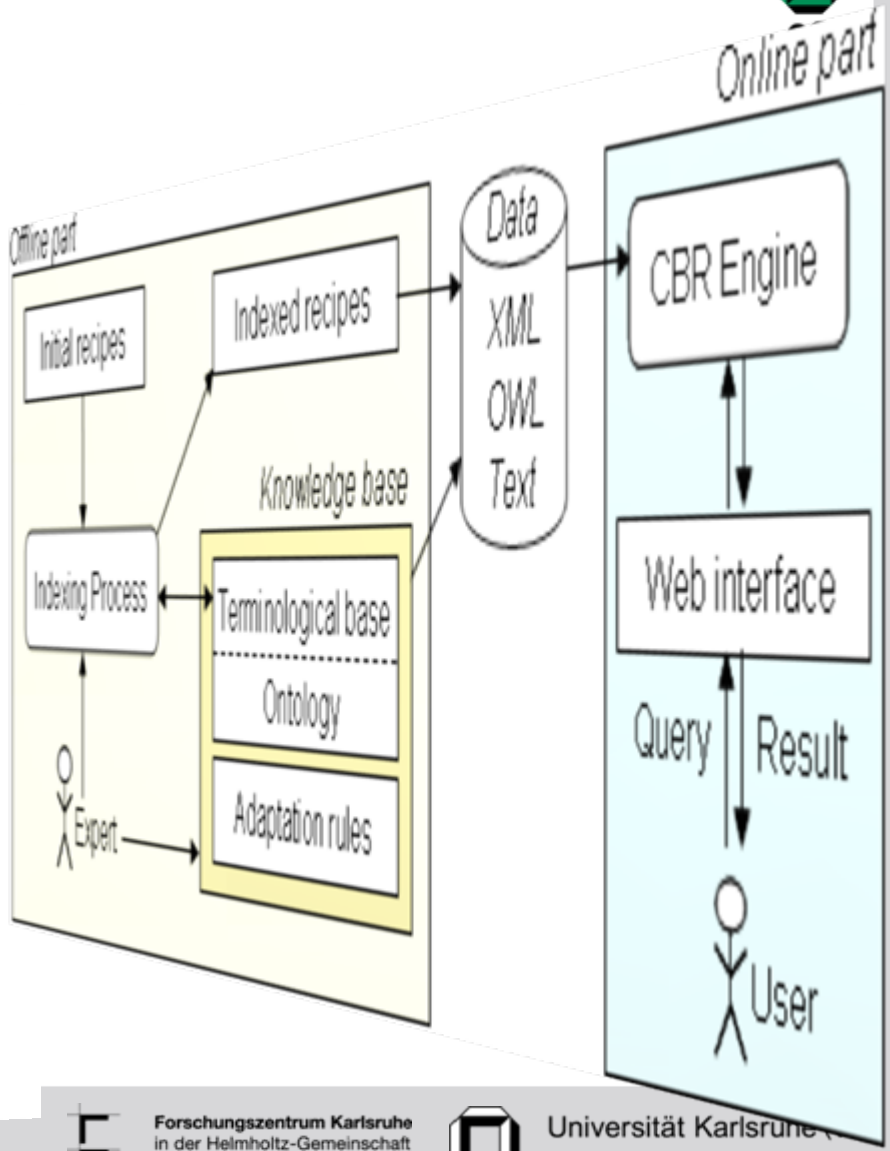
Facts about Apple pancakes from the townships RDF feed

IngredientLine	category:cinnamon (1, tsp, ?, ?, ?) + , category:egg (2, ?, ?, ?, ?) + , category:all-purpose_flour (2, c, ?, ?, ?) + , category:baking_powder (1, tblsp, ?, ?, ?) + , category:baking_soda (1, tsp, ?, ?, ?) + , category:granulated_sugar (3, tblsp, ?, ?, ?) + , category:buttermilk_or_milk_or_sour_milk (2 1/4, c, ?, ?, ?) + , category:apple (1, c, unpeeled,cut,piece, ?, in) + , and category:butter (6, tblsp, melt, ?, ?) +

Categories: Recipe | RecipeCompulsary | American dish | Canadian dish | Main dish | Breakfast dish | Pancake dish | Cake dish

WikiTaaable Architecture





IngredientSubstitution42

Positive Context : Salad

Negative Context : Potato

Positive From : Vinegar

Positive By :Citron and Salt Cost: :0.3

Facts about IngredientSubstitution42 RDF feed

HasCost	0.3 +
NegativeContext	Potato +
PositiveBy	Citron +, and Salt +
PositiveContext	Salad +
PositiveFrom	Vinegar +

Category: Substitution

Ingredients

I want: orange ?

I don't want: ?

Type of dish

I want: pie ?

I don't want: ?

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35 days to go

Submission
Developer's Zone
Competition Rules
Results
Contact

ICCBR 2009

RESULTS

Finalist teams

The following teams have successfully passed the qualifying examination and will participate in the finale in July:

- **BlueCook**
  Rupali Bodhankar, Ashish Bindra, Kristoffer Canilang, Seth Galbraith, Glenda Hedden, Isabelle Bichindaritz
- **CookingCAKE**
  Christian Fuchs, Christoph Gimmler, Simon Günther, Lukas Holthof, Ralph Bergmann
- **CookIIS**
  Norman Ihle, Regis Newo, Alexandre Hanft, Kerstin Bach, Meike Reichle
- **JaDaCook2**
  P. Javier Herrera, Pablo Iglesias, Ana M Garcia Sanchez, Belen Diaz-Agudo
- **WikiTaaable**
  Fadi Badra, Julien Cojan, Amelie Cordier, Jean Lieber, Thomas Meilender, Alain Mille, Pascal Molli, Emmanuel Nauer, Amadeo Napoli, Hala Skaf-Molli, Yannick Toussaint

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SNPedia

SNPedia shares information about the effects of variations in DNA, citing peer-reviewed scientific publications. It is used by Promethease to analyze and help explain your DNA.

Help! [edit]

- look at the example rs1234
- learn more about SNPs
- browse
  - genes
  - genomes
  - genosets
  - medicines
  - medical conditions

Science Educators [edit]

Using SNPedia or Promethease for science education? Why not apply for a Science SPORE prize? Deadline is June 30; full details are here. Educators are encouraged to contact us at any time via email (info@snpedia.com) to suggest collaboration possibilities as well.

Popular [edit]

- rs1815739 sprinters vs endurance athletes
- rs4420638 and rs429358 can raise the risk of Alzheimer's disease by more than 10x
- rs6152 can prevent baldness
- rs333 resistance to HIV
- rs1800497 in a dopamine receptor may influence the sense of pleasure
- rs1805007 determines red hair and sensitivity to anesthetics
- rs9939609 triggers obesity and type-2 diabetes
- rs662799 prevents weight gain from high fat diets
- rs7495174 green eye color and rs12913832 for blue eye color
- rs7903146 in 3% of the population greatly increases the risk of type-2 diabetes
- rs12255372 linked to type-2 diabetes and breast cancer
- rs324650 influences intelligence and alcohol dependence
- rs1799971 makes alcohol cravings stronger
- rs17822931 determines earwax

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Rs4778241

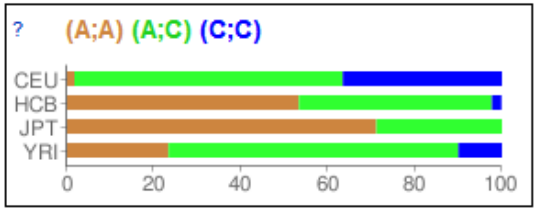
rs4778241 is part of a haplotype spanning 166kB on chromosome 15, defined by 13 SNPs listed below, found in 97% of all Caucasians with blue eyes. In this haplotype, variations in rs1129038 and rs12913832 are relatively common in Caucasians though rare among other ethnic groups.[PMID 18172690]

The "h-1" haplotype found in homozygous state in 97% of individuals with blue eye color is composed as follows [PMID 18172690]:

rs4778241(C)
rs1129038(A)
rs12593929(A)
rs12913832(G)
rs7183877(C)
rs3935591(G)
rs7170852(A)
rs2238289(T)
rs3940272(C)
rs8028689(T)
rs2240203(A)
rs11631797(G)
rs916977(G)

is a	snp
is	mentioned by
dbSNP	rs4778241
hapmap	rs4778241
hgdp	rs4778241
ensembl	rs4778241
gopubmed	rs4778241
scholar	rs4778241
google	rs4778241
pharmgkb	rs4778241
hgvbaseg2p	rs4778241
medrefsnp	rs4778241
23andMe	rs4778241
SNP Nexus	rs4778241
Gene	OCA2
Chromosome	15
Orientation	plus
Position	26012308

Genotype	Effect
rs4778241(A;A)*	usually brown eye color
rs4778241(A;C)*	usually brown eye color
rs4778241(C;C)*	blue eye color if part of blue eye color haplotype



Categories: Is a snp | In dbSNP | Has genotype | SNPs on chromosome 15 | Has population | On chip 23andMe v1 | On chip Illumina Human 1M | On

the spittoon

more than you've come to expectorate

About

Welcome to The Spittoon, a blog written by the people of 23andMe. Using nothing more than a bit of saliva (Get it? The Spittoon!), the genotyping process we use analyzes more than 580,000 locations in a person's genome. Then we help our customers read and understand their DNA using tools available on our website, www.23andme.com.

Find us on Twitter.

RSS

Recent Posts

- SNPwatch: Genetic Variation May Help Immune System Put Up Just The Right Amount Of Fight
- 23andMe's New and Improved Paternal Haplogroups
- Recalibrating the Genetic Clock: Scientists Develop New and Improved Method for Timing Prehistoric Human Migrations Using Mitochondrial DNA

And the Winner Is ...

May 14 2008

Published by MattC at 11:28 am under 23andMe and you

The judges have met and a winner has been chosen.

In the first 23andMe Win Your Genome Contest, the challenge was to describe Lilly Mendel – a real person whose data are presented in the 23andMe demo account – based on her genetic information alone. As we declared in the announcement of the contest, entries were judged based on accuracy, creativity and cleverness.

Could this be Lilly Mendel?

Cleverness we got. More than one entrant actually claimed to BE Lilly Mendel. Many entries employed flattery by concentrating on Lilly's physical attractiveness, intelligence and athletic ability – very clever.

As for creativity, we have no idea where some of you got the idea that Lilly's family harbors a secret fear of "gigantism," that she enjoys dancing the tango or that her nose twitches when she gets angry. And though her genes may indicate a preference for the bignay fruit, we have no idea if she has ever tasted it.

Aufgabe

- Was ist die Zukunft des Semantic Webs?

- Wie sieht das Programm für die nächsten 10 Jahre aus?

Mittwoch Vorlesung

Anmeldung für Prüfungen läuft!