a forward look at federated wiki

ward cunningham



wiki as pattern language

structured essays offering solutions to recurring problems in context.

body that evolves through repeated application and evaluation.

A Pattern Language Alexander



Positive Outdoor Space

... in making South Facing Outdoors you must both choose the place to build, and also choose the place for the outdoors. You cannot shape the one without the Cascade Of Roofs

the geometric character of ings Oflight - gives you the



... this pattern, the first of the 130 patterns which deal specifically with buildings, is the bottleneck through which all languages pass from the social layouts of the earlier patterns to the smaller ones which def individual spaces.

Assume that you have decided to build a ce building. The social groups or institutions w building is meant to house are given - partly peculiar to your own case, and partly, perh earlier patterns. Now this pattern and the Number Of Stories, give you the basis of t layout on the site. This pattern shows you break the building into parts. NUMBER O helps you decide how high to make each Obviously, the two patterns must be use

A building cannot be a human building unless it is a complex of still smaller buildings or smaller parts which manifest its own internal social facts.

Therefore:

Never build large monolithic buildings. Whenever possible translate your building program into a building whose parts

Light On Two Sides Of Every Room

... once the building's major rooms are in position, we have to fix its actual shape: and this we do essentially with the position of the edge. The edge has got its rough position already from the overall form of the building -Wings Oflight, Positive Outdoor Space, Long Thin House, Cascade Of Roofs, This pattern now completes the work of Wings Oflight, by placing each individual room exactly where it needs to be to get the light. It forms the exact line of the building edge, according to the position of these individual rooms. The next pattern starts to shape the edge.

When they have a choice, people will always gravitate to those rooms which have light on two sides, and leave the rooms which are lit only from one side unused and empty.

Therefore:

Locate each room so that it



Light On Two Sides Of Every

. . . this pattern helps complete the Building Complex, Number Of Stories Main Building, and Wings Oflight, to help create these patterns. If liding from scratch, these larger nelped you to decide how high they have given you a rough idea of what spaces there are of the wings. Now we come to essary to visualize the building re, above all else, as a system



ve Outdoor Space are placed on



Reliable Prosperity EcoTrust



Compact Towns and Cities

As cities and towns sprawl into the countryside, it becomes more expensive and less equitable to provide services to outlying suburbs. Congestion increases, farmland is lost,

nding rural areas is threatened. nd countryside is greatly



In the midst of unprecedented wealth throughout the bioregion, there are still rural and urban pockets of poverty, hunger, sub-standard housing, and poor health-care.

The long-term cross-cultural studies of economist Manfred Max-Neef suggest that fundamental needs fall into nine universal categories: Subsistence Rights, Security, affection, Access to Knowledge, Civic Society. idleness, Beauty and Play, identity, and freedom. Reliable Prosperity is structured to meet these needs for all people. Household Economies, and Bioregional Econom needs are met as locally as possible

A regional food system provides he regional sources, minimizing the ne unpredictable price and quality. It access to food resources across stable land tenure for farmers and fishermen. It treats food security affordable, healthy food - as a f

Health is the most fundamental of people is utterly dependent o Services like pure water, clean duction a Climate Ser



Bioregional Economies

ms,

Globalization is creating economic insecurity and increasing the gap between rich and poor. At the same time, it is undermining Cultural Diversity and turning complex ecosystems into streams of standardized

Reliable Prosperity

This site consists of short essays, called patterns, which form a hierarchy that starts here. We also list each pattern in alphabetical order within the Reliable Prosperity Index.

When the health of ecosystems and communities is not integrated into economic activities, all three suffer. In turn, economic dependence on destructive activities creates apparent conflicts between work, nature, and community. How can we create an economy that effectively meets human needs while regenerating natural systems? An economy which grows organically - and fills new niches — by working with nature and enriching human capacities?

In a world of reliable prosperity, Capital arrangements of all kinds are gradually redesigned so that they restore - rather than deplete - Nature and Society. This will create extraordinary opportunities for those who foresee and drive these changes. The



This coastal estuary in Prince William Sound, Alaska is part of the coastal temperate rainforest stretching from Big Sur to Kodiak

reflect ations of Veeds

A farmer's market in downtown

trade on favorable terms nomic sovereignty in the

unize the need for Fair Trade, xporting goods produced estructive manner. They Pricing, building actual s into market prices. In ord



ages held within a connected ests, and open spaces. Each rom well-differentiated and centers, and is bounded Building techniques ergy, and materials.

are significant: more structure, utilities, and ransit Access; pedestrians; and better integrated es, towns, and villages prests and farms, helping maintain wildlands. tates with land-use laws terns, including Oregon, n states without such

Build Tomorrow Mehaffy



Readiness Diagnostic

Upward Hyperlinks: Regional

Problem: Different sites have different levels of readiness for development, requiring different tools.

Discussion: In some sites will simply not t development for a n require specialized an analysis of these branching set of ifcustomized tools t

The Diagnostic pl Diagnostic Test. in the sub-patter the modeling.

> Therefore: Whe implementation identify key iss essential for p and Neighbor

> > Note: No trac



Town Center

Not all sites are created equal!

Upward Hyperlinks: Urban Center, Regional Plan. Be sure to use the Readiness Diagnostic before siting a Town Center.

Problem: Just as a neighborhood needs a center. groups of neighborhoods (usually about 4, depending on size) need a larger center, providing walkable access to services providing daily needs.

Discussion: People need a coordinated set of resources within walking distance of their homes. Studies show that walking distance is about 1/4 mile, and in certain conditions, can be increased to 1/2 mile.

Revend this distance that



Town Centers bring many essential services within daily

Persons in This Model

3,000

(Click to Recalibrate)

s such as



Living over the store -- at the edge of a single-family lot

e Works provide y to reduce small business vide needed neighborhood. the only place uilding is at the

hborhoods can

e activity of

usinesses -- if

ured carefully.

Accessory Live Works

Upward Hyperlinks: Town

Neighborhood

Center, Urban Center, Good

Persons in This Model (Click to Recalibrate)

alley. This can be done if codes are revised

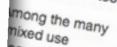
ccessory live ode changes, nartCode.

> Incremental Tax Income Per Capita Per Year

ixed use buildings lly demanding and pensive, making etitive. Yet they advantages too.

Mixed Use Building

Upward Hyperlinks: Urban Center, Town Center, Neighborhood Center.



Mised-use buildings pose many occupancy separation" between uses can nt expense. Some commercial uses, such produce cooking odors and/or noises that Residents can also create problems that

there are is for mixed can make or example. *20% Rule* cial to 20% tage. The

50

Persons in This Model (Default - Click to Recalibrate)

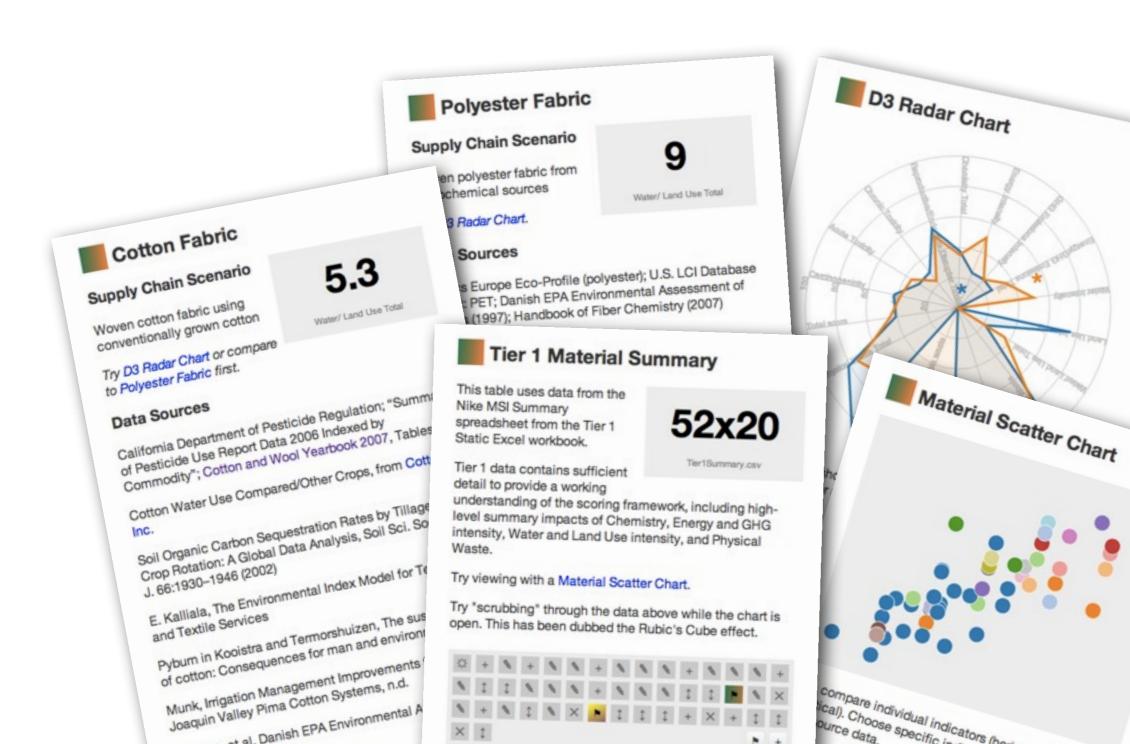
can be slow and complex, resulting in I risk (especially in suburban liar with mixed-use buildings).

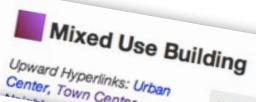
adiness mixed use a Prealify the

Per Capita Per Year

ing house -- such as in the front yard,or es, and to provide the minimal setbacks

Material Sustainability Index Nike





Compact Towns and Cities Center, Town Center,

As cities and towns sprawl into the countryside, it becomes more expensive and less equitable to provide services to outlying suburbs. Congestion increases, farmland is lost, and the stability of surrounding rural areas is threatened.

they es too. many

separation" between se. Some commercial cooking odors and/or nts can also create pro

dings

ng and

aking

Positive Outdoor Space

. . . in making South Facing Outdoors you must both choose the place to build, and also choose the place for the outdoors. You cannot shape the one without the other. This pattern gives you the geometric character of the outdoors; the next one Wings Oflight - gives you the complementary shape of the indoors.

vhich are between



por spaces nd lie dings

h one some Positive Outdoor Space

re; surround each space with wings of edges, fences, arcades, and tralli omes an entity with

Building Complex

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individual spaces.

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In the mid bioregion, hunger, si br

Room

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with the positio

position already

Wings Oflight, F

House, Cascade

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Supply Cha Woven cotton conventionally Readiness Diagnostic

Upward Hyperlinks: Regional Plan.

Upward Hyperlinks: Urban to use the Readiness

surrent sites have

Town Center

Center, Regional Plan. Be sure Diagnostic before siting a Town



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nomic dependence on arent conflicts between v can we create an ec nan needs while reger nomy which grows o y working with natur

ital arrangements s are gradually re nat they restore deplete - Nat ety. This will cr ordinary oppr who forese e changes.

D3 Radar Chart

grated into economic ac

world of reliable p amental Ne

9

Water/ Land Use Total

Try D3 Radar Chart.

petrochemical sources

Data Sources

Light On Two Sides Of Every

... once the building's major rooms are in position, we

Polyester Fabric

Supply Chain Scenario

Woven polyester fabric from

Plastics Europe Eco-Profile (polyester); U.S. LCI Database Project: PET; Danish EPA Environmental Assessment of Textiles (1997); Handbook of Fiber Chemistry (2007)

Raw Material Factor

eople want to rhoods

Upward Hyperlinks: Town

Center, Urban Center, Good

s from home ivity o

Accessory Live Works

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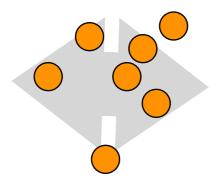
Globalization is creating economic insecurity and increasing the gap between rich and poor. At the same time, it is undermining Cultural Diversity and turning complex ecosystems into streams of standardized



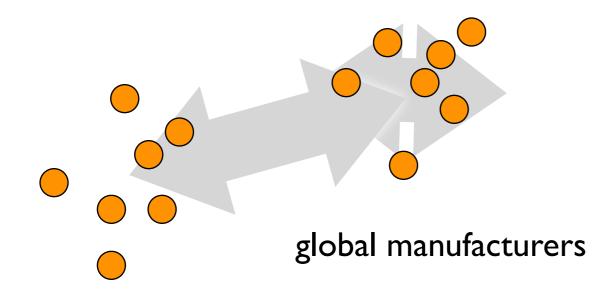
information ecosystem

collective accumulation and interpretation of observations.

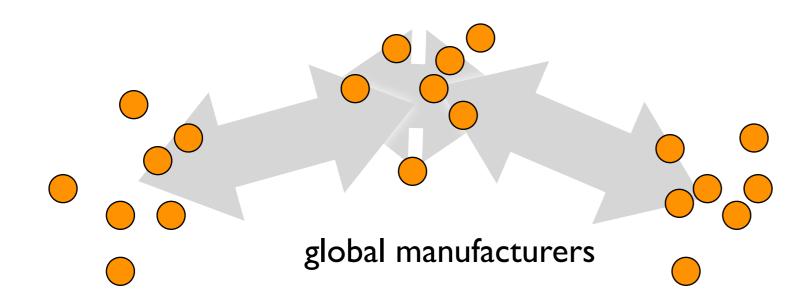
reasoned balance between individual and community interests.



global manufacturers

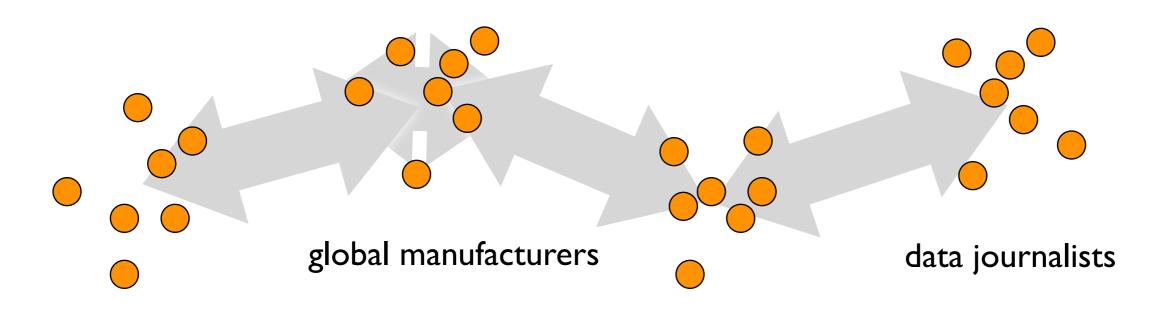


innovative suppliers



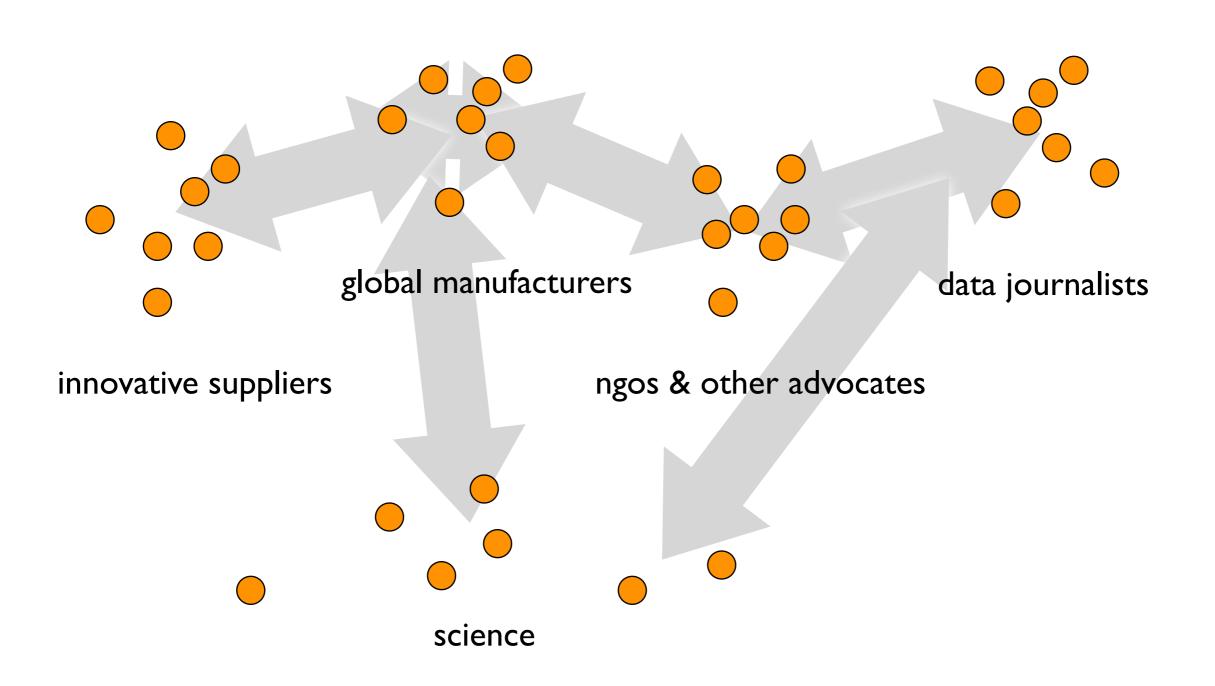
innovative suppliers

ngos & other advocates



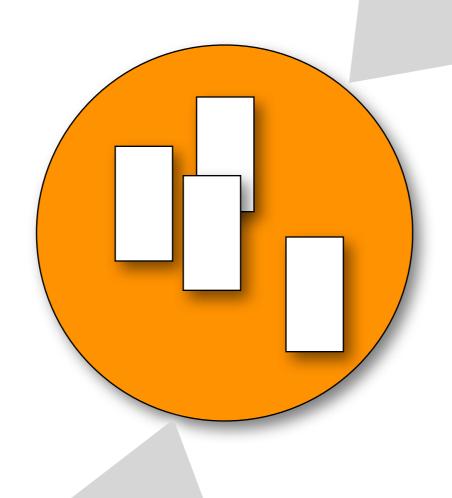
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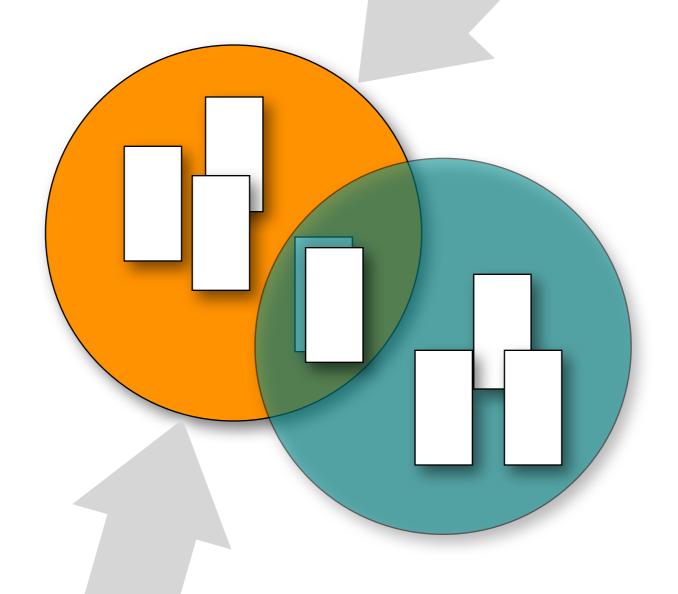
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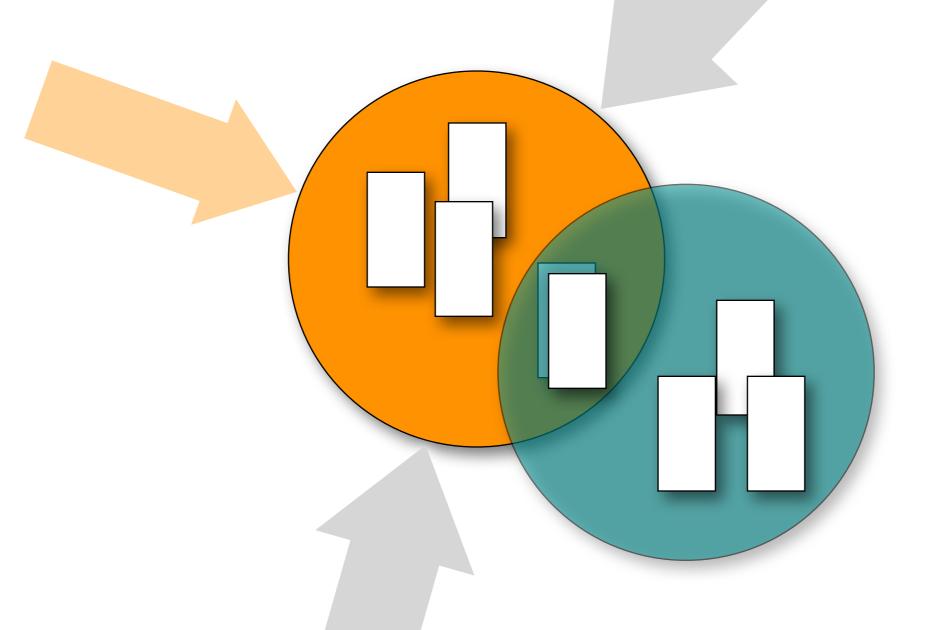


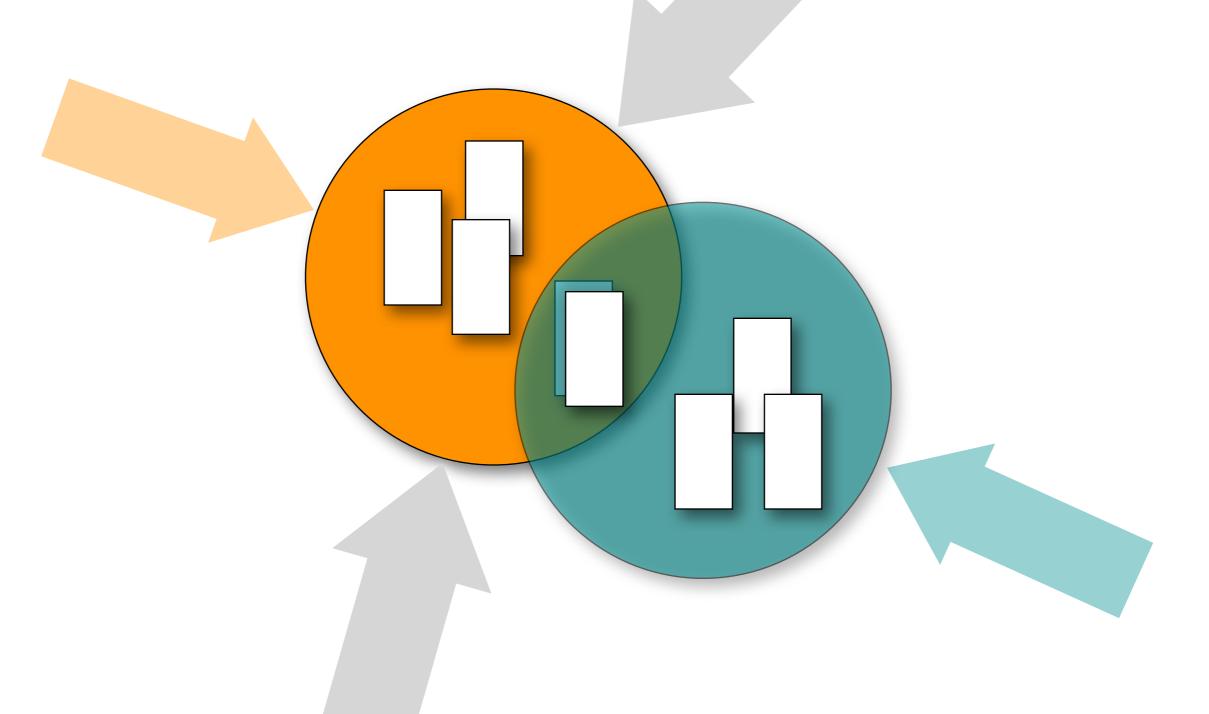
federation as a chorus of voices interested public global manufacturers data journalists ngos & other advocates innovative suppliers science

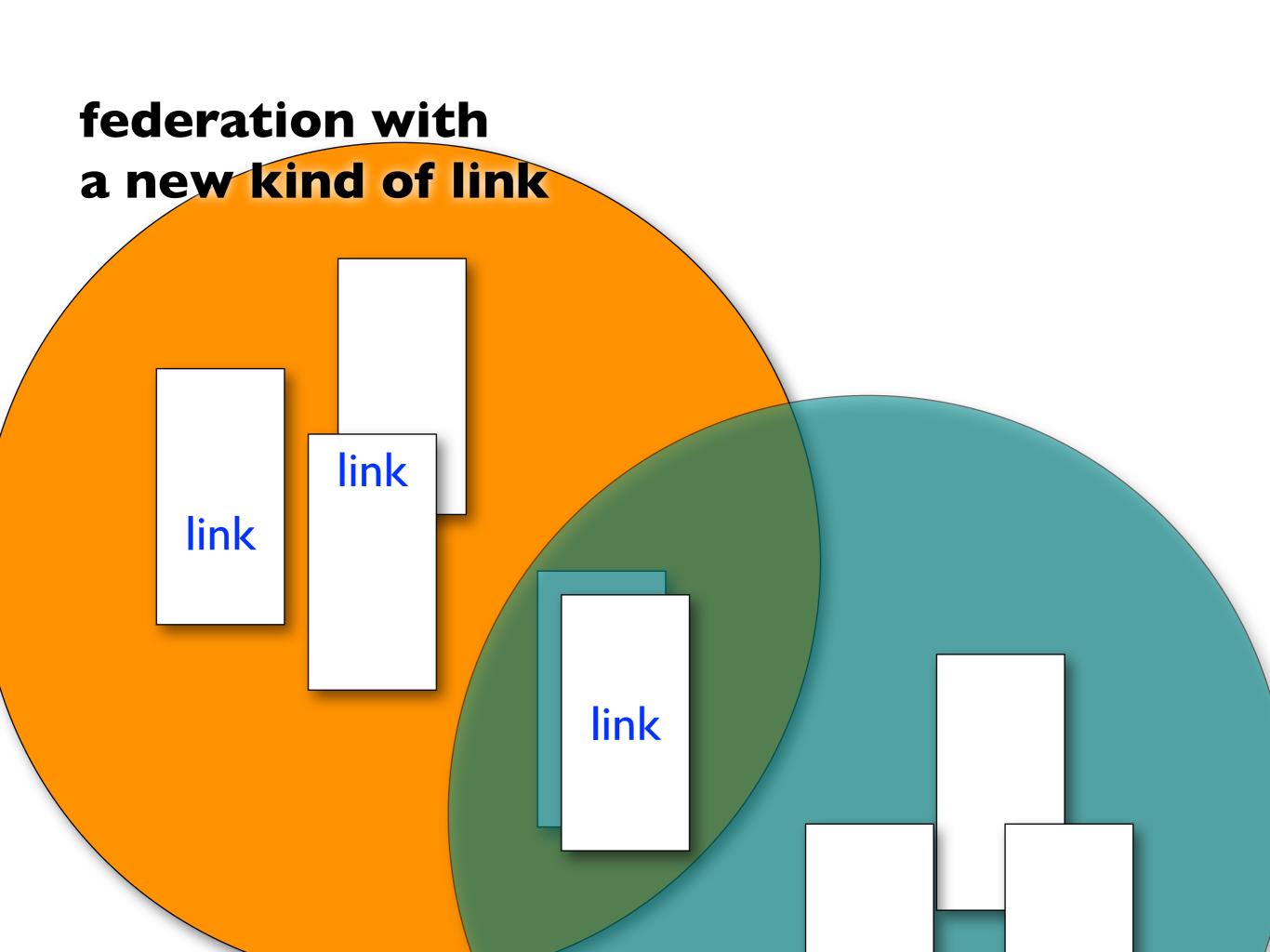
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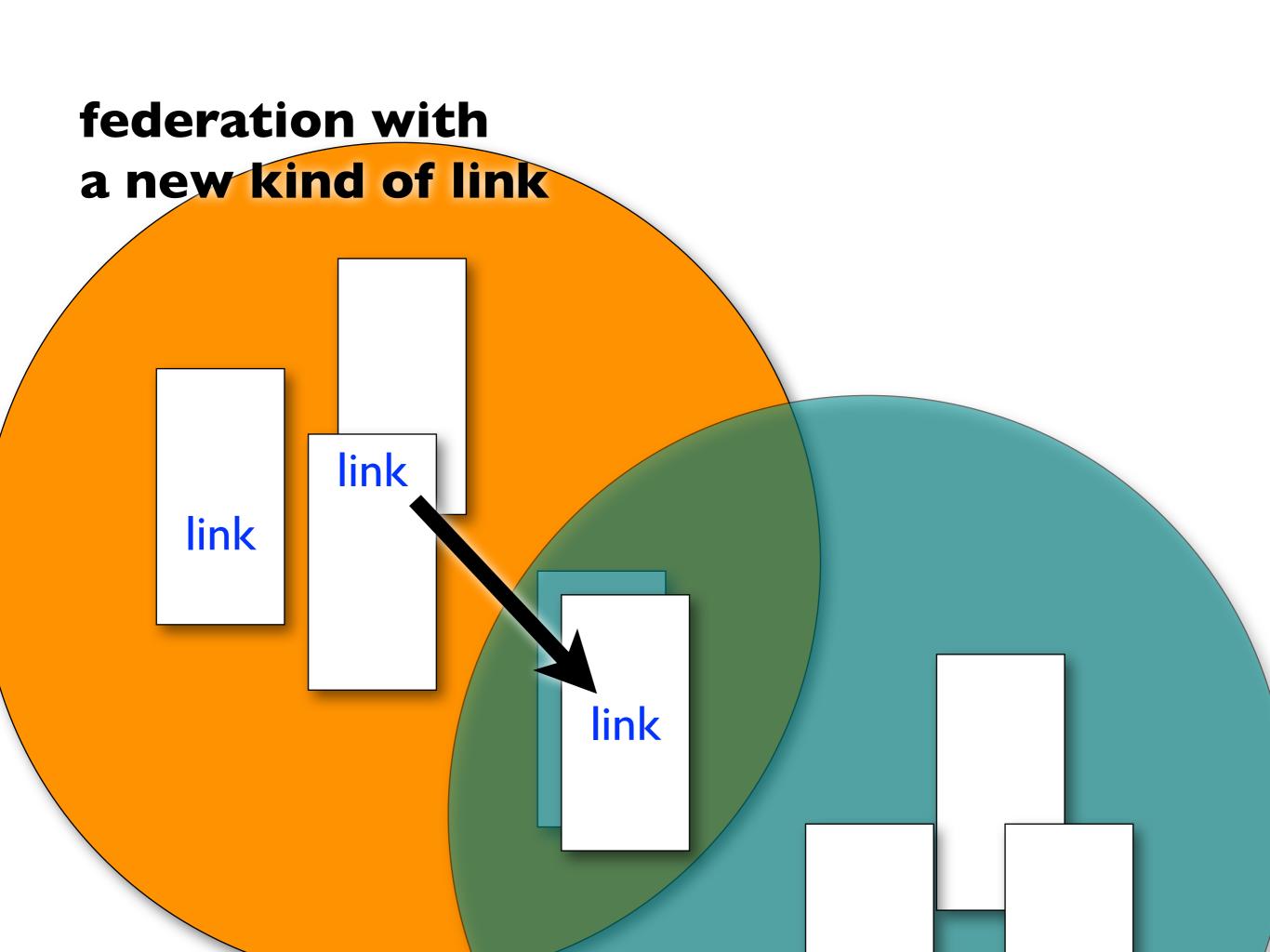


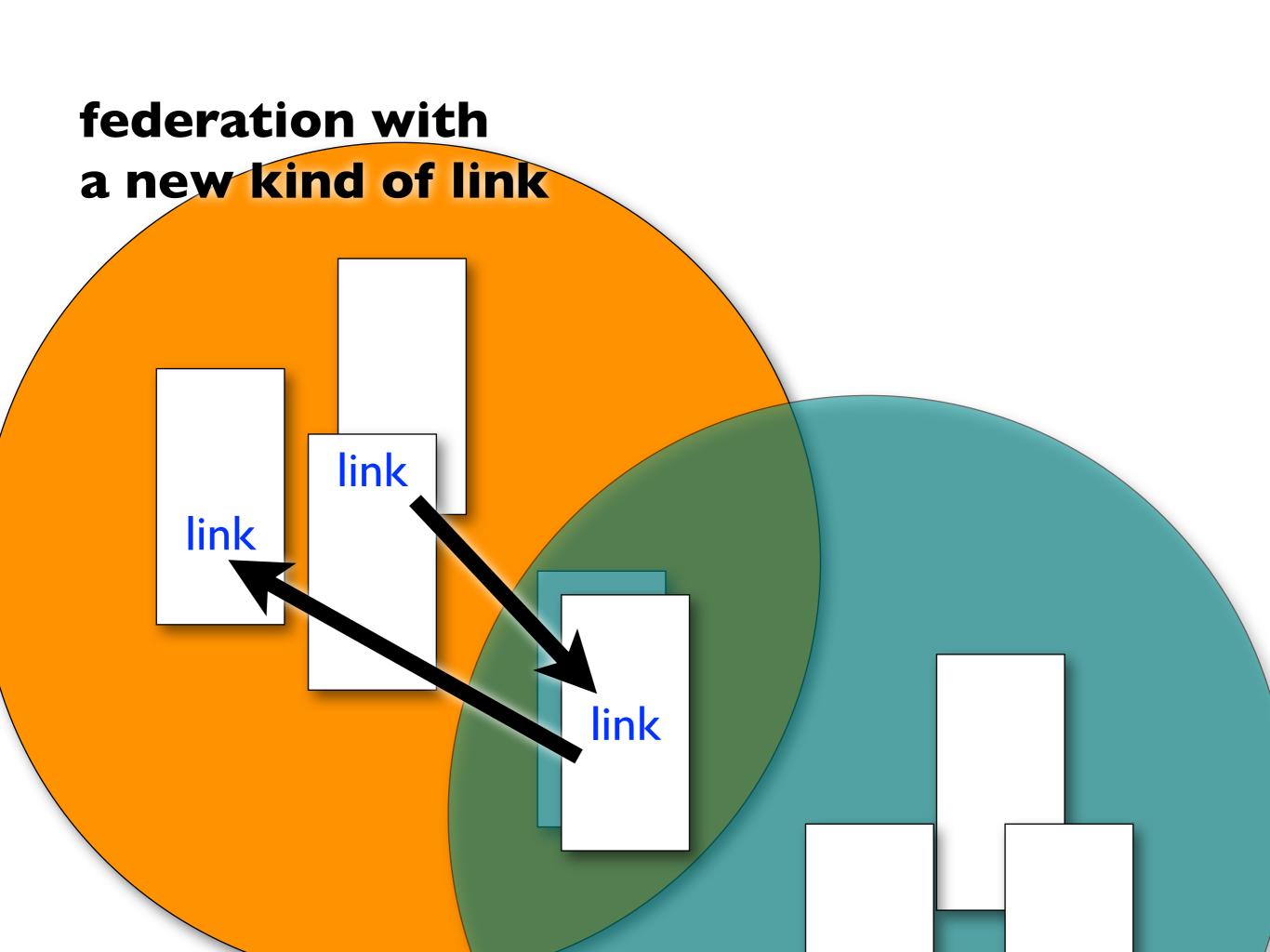


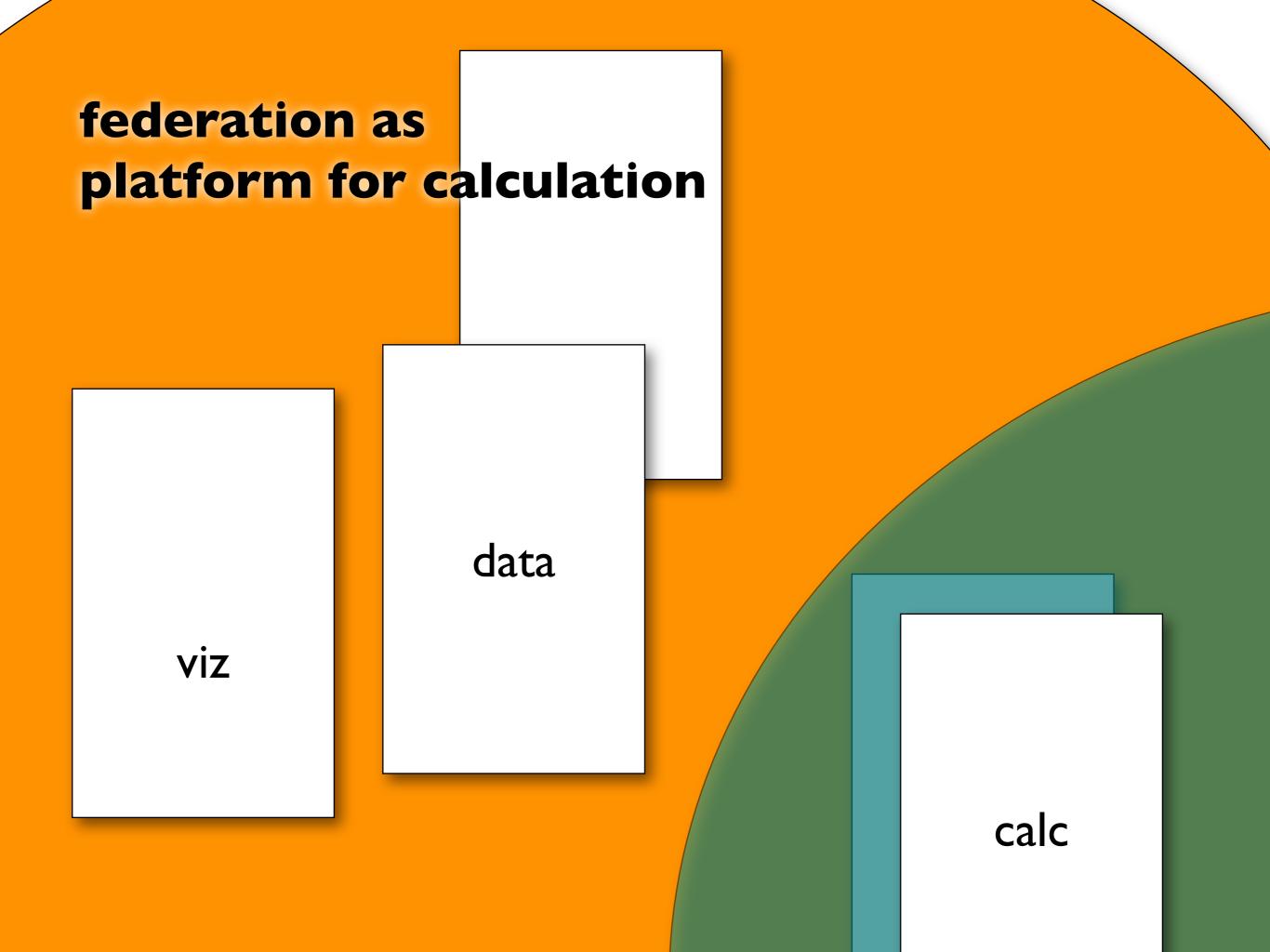


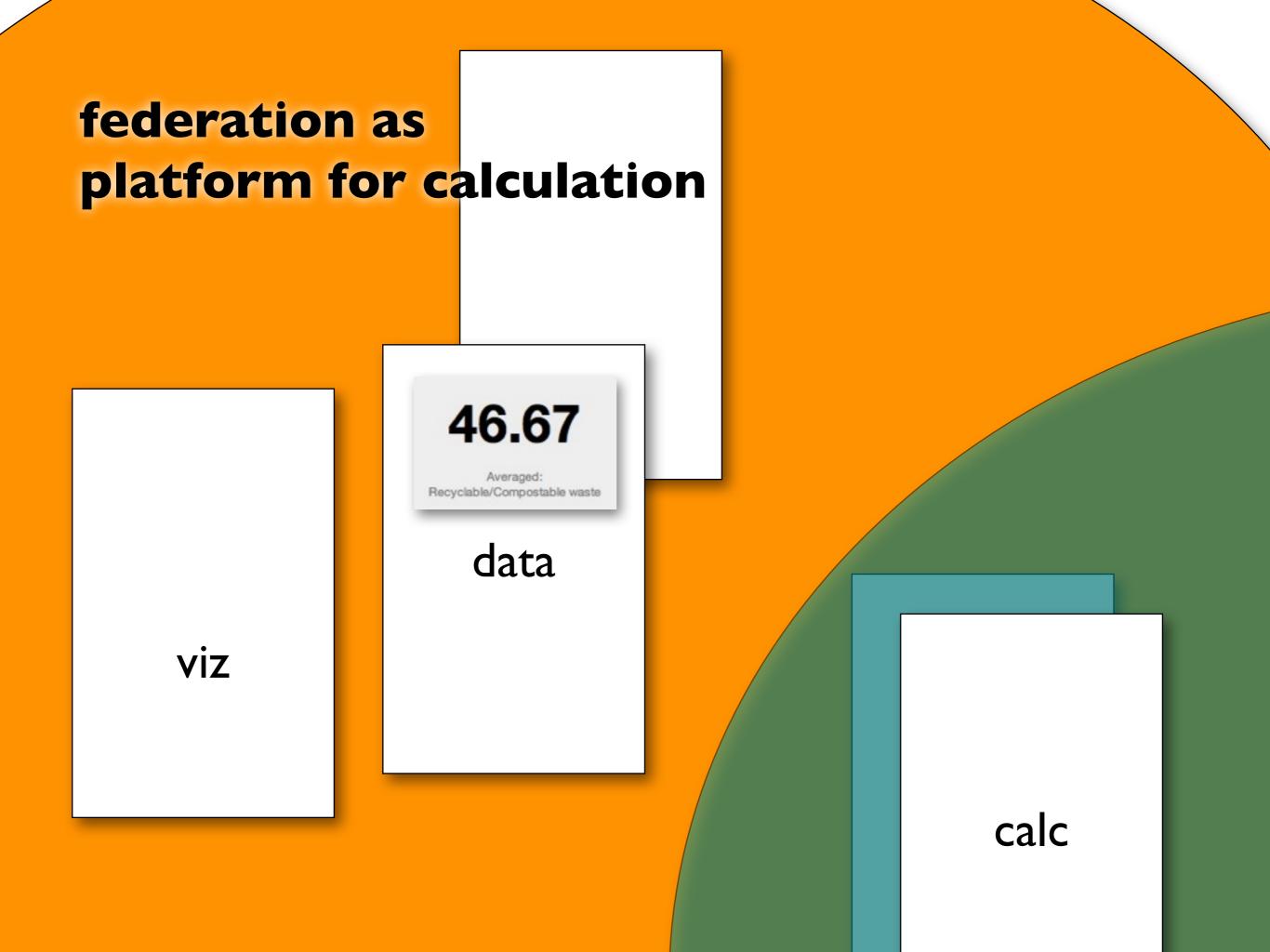


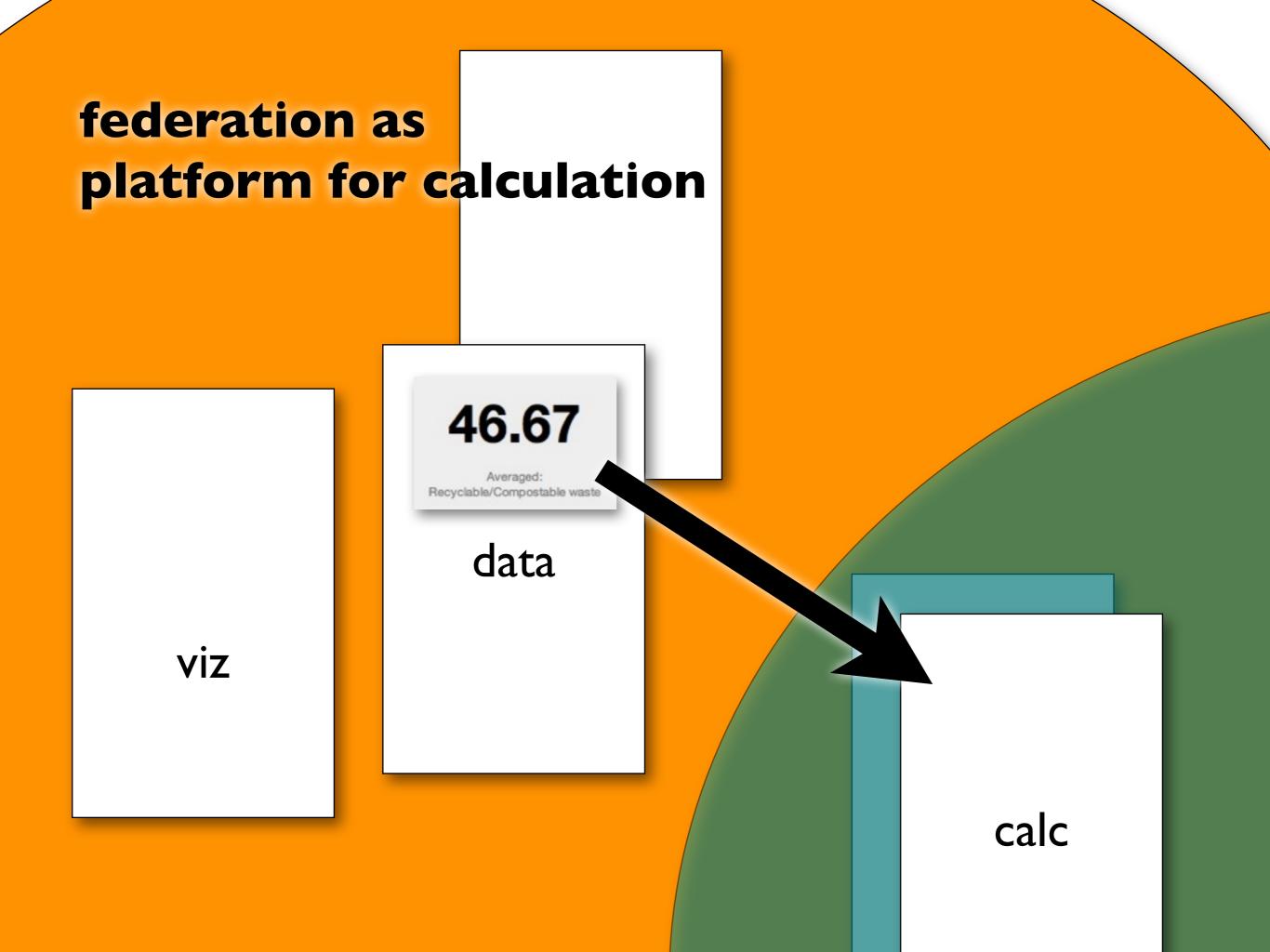


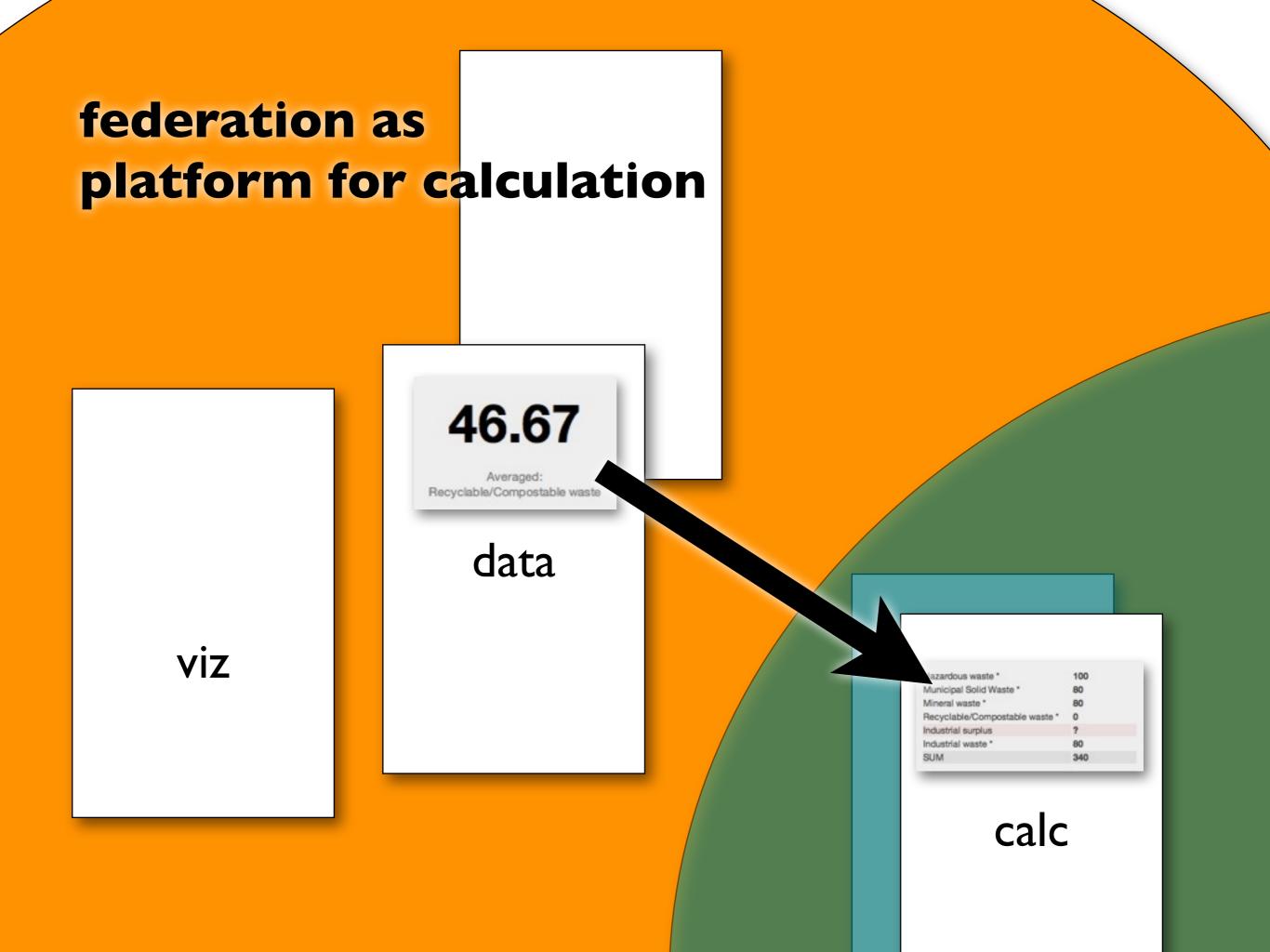


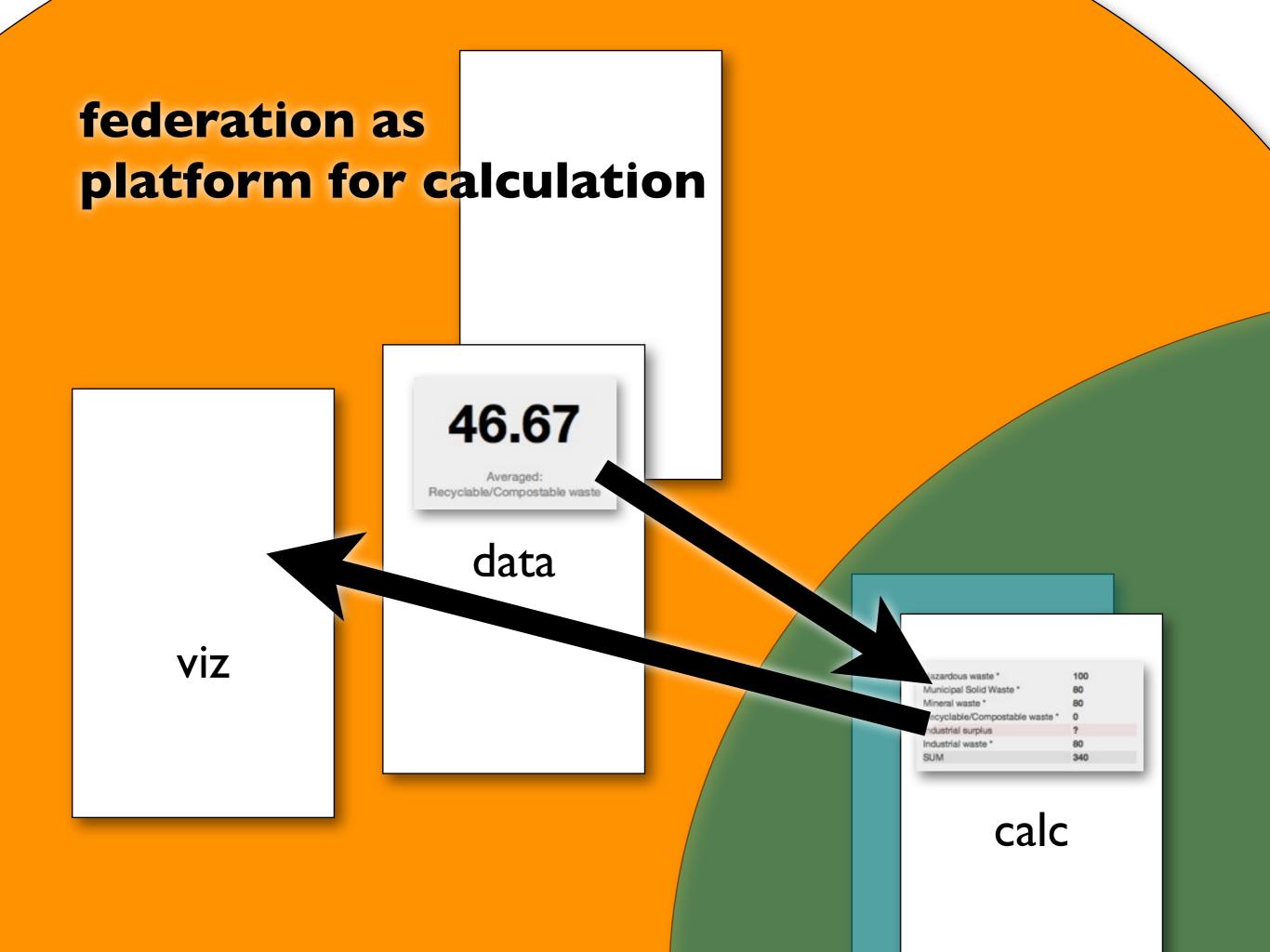




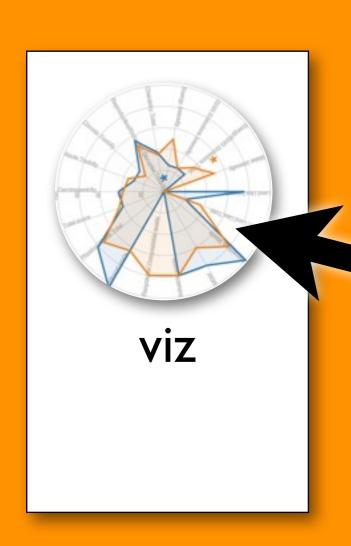








federation as platform for calculation



46.67

Recyclable/Compostable waste

data

azardous waste *	100
Municipal Solid Waste *	80
Mineral waste *	80
ecyclable/Compostable waste *	0
ndustrial surplus	?
Industrial waste *	80
SUM	340

calc

Water Scoring Drivers: Phase 1: Moderately low overall; low relative to other synthetics Phase 2: Moderate overall; higher than solution dyed synthetics Land Scoring Drivers: Synthetic physical waste -Recyclable / Compostable Waste 2 Plastics 310 Waste to recycling **312 SUM** 0.90 Recyclable / Compostable Waste 1.7 Recyclable / Compostable Waste Points 1.54 Recyclable / Compostable Waste 1.54 Recyclable / Compostable Waste 1.21 Municipal Solid Waste 0.75 Mineral Waste

3.13 Hazardous Waste

9.68 Physical Waste Total *

3.07 Industrial Waste

Water Scoring Drivers:

Phase 1: Moderately low overall; low relative to other synthetics

Phase 2: Moderate overall; higher than solution dyed synthetics

Land Scoring Drivers:

Synthetic

physical waste -

Recyclable / Compostable Waste

2 Plastics
310 Waste to recycling
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•••

1.54 Recyclable / Compostable Waste

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0.75 Mineral Waste

3.13 Hazardous Waste

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9.68 Physical Waste Total *

Phase 1: Moderately low overall; low relative to other synthetics

Phase 2: Moderate overall; higher than solution dyed synthetics

Land Scoring Drivers:

```
Synthetic
                apply = (name, list, label) ->
                  color = '#ddd'
                  switch name
                      'SUM' then sum list
Recyclable / (
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                    when 'MIN', 'MINIMUM' then _.min list
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                    when 'POLYNOMIAL' then polynomial list[0], label
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                    else throw new Error "don't know how to #{name}"
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```
1.54 Recyclable / Compostable Waste
1.21 Municipal Solid Waste
0.75 Mineral Waste
3.13 Hazardous Waste
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      1.54 Recyclable / Compostable Waste
      1.21 Municipal Solid Waste
      0.75 Mineral Waste
      3.13 Hazardous Waste
```

3.07 Industrial Waste

9.68 Physical Waste Total *

```
polynomial = (v, subtype) ->
  table = attach 'Tier3Polynomia
  row = _.find table, (row) ->
    row.SubType == subtype and a
  throw new Error "can't find a
  result = asValue(row.C0)
  result += asValue(row.C1) * v
  result += asValue(row.C2) * Ma
  result += asValue(row.C3) * Ma
  result += asValue(row.C4) * Ma
  result += asValue(row.C5) * Ma
  result += asValue(row.C6) * Ma
  if asValue(row['One minus'])
    1 - result
  else
    result
```

Water Scoring Drivers:

Phase 1: Moderately low overall; low relative to other synthetics

Phase 2: Moderate overall; higher than solution dyed synthetics

Land Scoring Drivers:

```
Synthetic
                 apply = (name, list, label) ->
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                   switch name
                         'SUM' then sum list
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                     wien 'AVG', 'AVERAGE' then ava list
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3.13 Hazardous Waste

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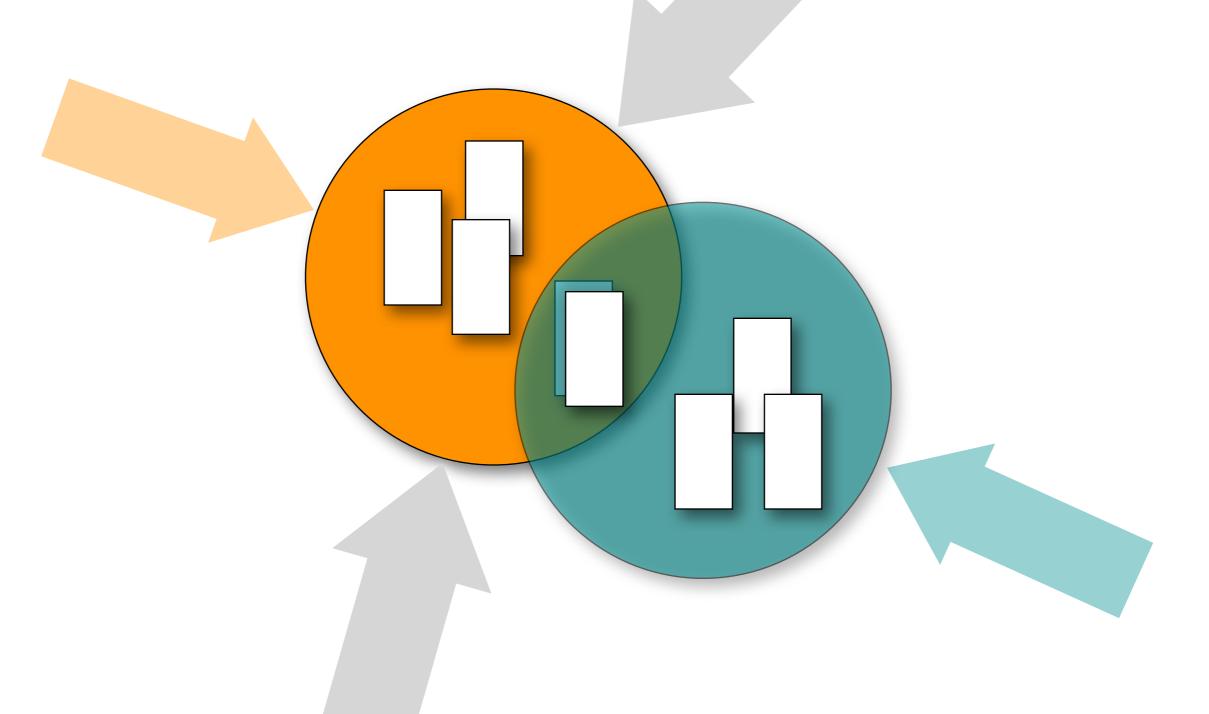
3.07 Industrial Waste

19x12

Tier3Polynomials

```
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  result += asValue(row.C6) * Ma
  if asValue(row['One minus'])
    1 - result
  else
    result
```

federation for gradual improvement



federation as a chorus of voices interested public global manufacturers data journalists ngos & other advocates innovative suppliers science

story, journal & attribution

a page has a title and tells a story in a sequence of varied paragraphs.

a page has a journal that recounts the creation of the story including attributions.

Here we report the air temperature measured in Ward Cunningham's back yard. The thermometer is placed 18 inches from the east-facing lower-level of the 8.09

12:00 PM 16 Sep 2011

sensor from morning sun except for an hour or two midhouse. Trees shade the morning. More elaborate reporting can be found in Ward's SensorServer site.

Try rendering with D3 Line.

This page includes a chart item that contains a time series of data samples, the most recent of which is shown in the readout. The time series is updated by a cron script. The script transmits a Txtzyme program over USB to an attached Teensy micro-



Sensor placement

signals a Maxium DS18B20 @ digital thermometer over their controller. This program one-wire protocol. Return data is translated to Fahrenheit by the script and then edited into the flat-file JSON representation of this page.

Live data is an experiment for Federated Wiki. Although the

Here we report the air temperature measured in Ward Cunningham's back yard. The thermometer is placed 18 inches from the east-facing lower-level of the

60.8

12:00 PM 16 Sep 2011

house. Trees shade the sensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except for an hour or two midsensor from morning sun except from the first from the fi

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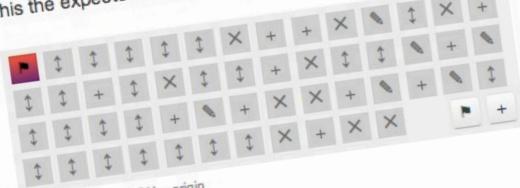
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Sensor placement

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CC BY-SA 3.0 . JSON . origin

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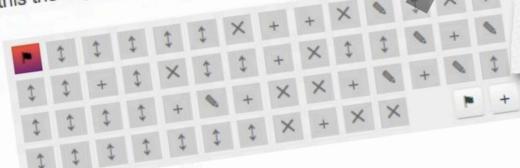
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CC BY-SA 3.0 . JSON . origin



Air Temperature

Here we report the air temperature measured in Ward Cunningham's back yard. The thermometer is placed 18 inches from the east-facing lower-level of the house. Trees shade the

Revision 11

55.9

Degrees Fahrenheit updated hourly

sensor from morning sun except for an hour or two midmorning. More elaborate reporting can be found in Ward's



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sensor from morning sun except for an hour or two midhouse. Trees shade the morning. More elaborate reporting can be found in Ward's SensorServer @ site.

Try rendering with D3 Line.

This page includes a chart item that contains a time series of data samples, the most recent of which is shown in the readout. The time series is updated by a cron script. The script transmits a Txtzyme program over USB to an attached Teensy micro-



60.8

12:00 PM 16 Sep 2011

Sensor placement

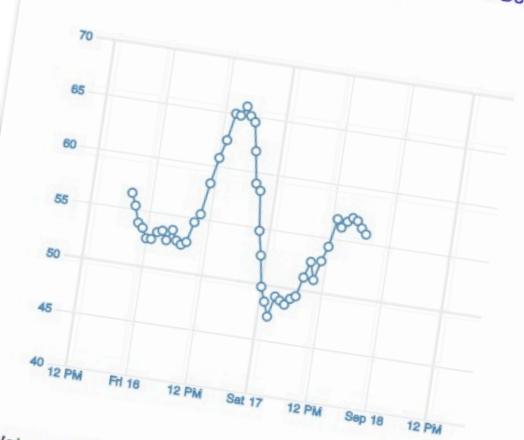
signals a Maxium DS18B20 @ digital thermometer over controller. This program one-wire protocol. Return data is translated to Fahrenh the script and then edited into the flat-file JSON representation of this page.

Live data is an experiment for Federated Wiki. Althor



D3 Line

This is the line example from the d3 @ distribution. If you see an error above, don't panic, keep reading. See also D3 Bars



We've modified the example to retrieve data from the page that contains it. We start by searching the page. Failing that, we search any other visible pages (soon). We'll be developing heuristics for best-fit of data when multiple sources are present.





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8.06

12:00 PM 16 Sep 2011

Sensor placement

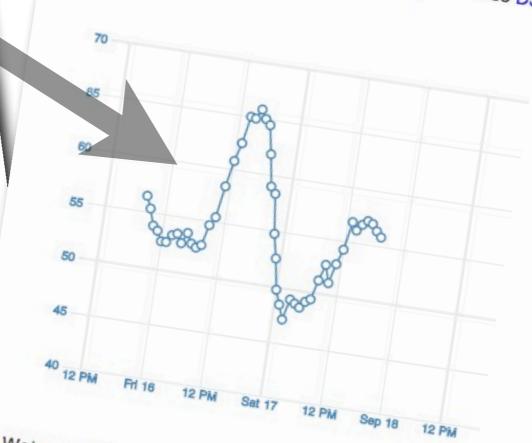
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12:00 PM 16 Sep 2011

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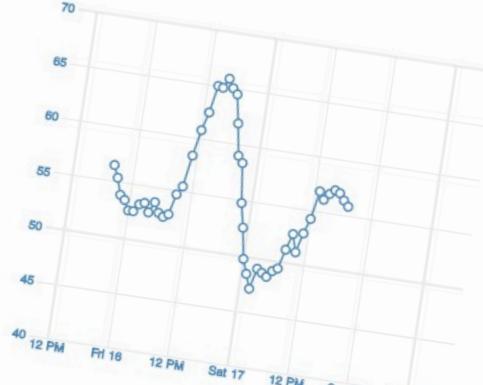


Sensor placement

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Live data is an experiment for Federated Wiki. Althor chart can be copied to other sites, it won't update t this the expected behavior? Is it the most useful?

12 PM 12 PM We've modified the example to retrieve data from the page that contains it. We start by searching the page. Failing that, we search any other visible pages (soon). We'll be developing heuristics for best-fit of data when multiple sources are present.



example.

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60.8

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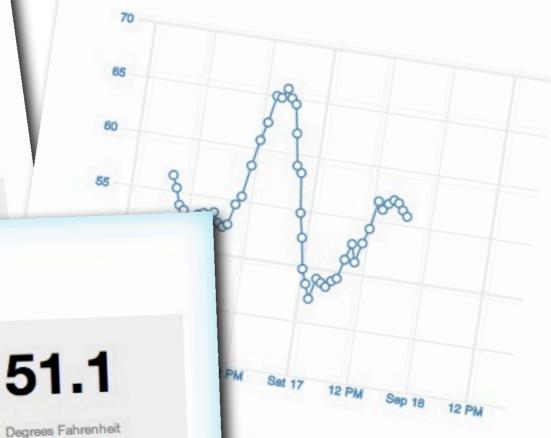
updated hourly

Sensor placement

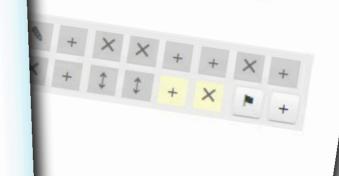
signals a Maxium DS18B20 digital thermometer over their one-wire protocol. Return data is translated to Fahrenheit by the script and then edited into the flat-file JSON representation of this page.

example.

See also D3 Bars



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51.1

example.

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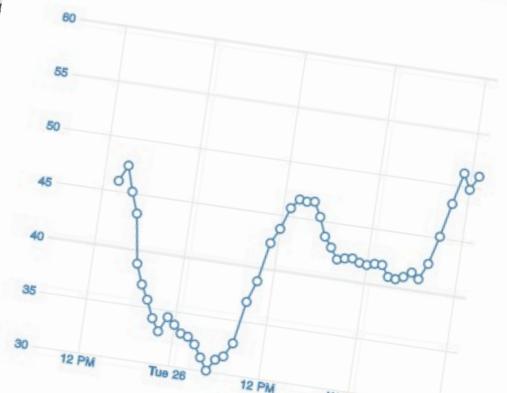
Degrees Fahrenheit updated hourly

Sensor place

D3 Line

an error above, don't panic, keep reading. See also D3 Bars

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12 PM

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70

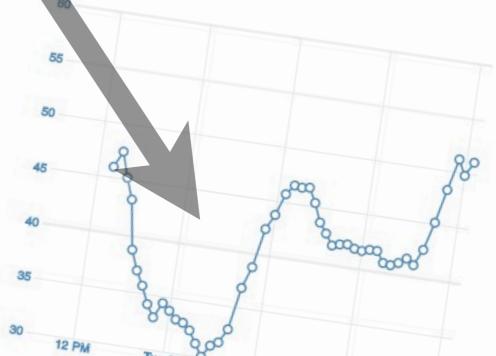
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Sensor place

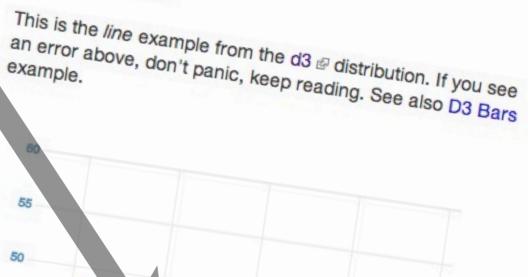


12 PM

12 PM

D3 Line

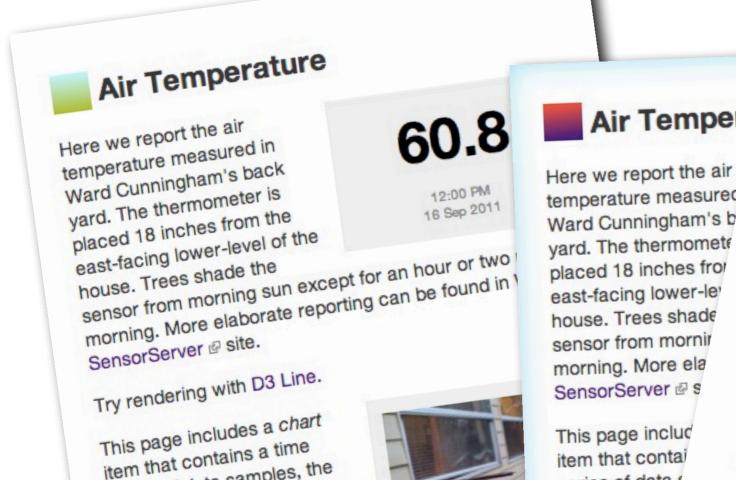
an error above, don't panic, keep reading. See also D3 Bars



good time for a demonstration

Air Tempera

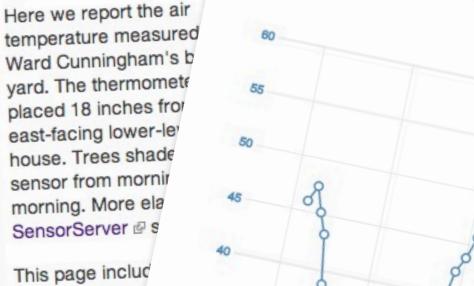
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to comples, the

D3 Line

an error above, don't panic, keep reading. See also D3 Bars



35

refactoring calculations

a calculation looks up and to the left for data.

good time for a demonstration



Welcome to the Smallest Federated recreates the wiki refactoring demo conference in Portland, Oregon.

One: A page about myself.

Ward Cunningham

Two: Page about things to do

OSCON 2012 Demo Video

OSCON 2012 Demo Pages

. You don't need to



OSCON 2012 Demo Video

We recreate the calculation refactoring example f open source conference and invite viewers to try

17. calculation-refactoring-beer

-3.00

Bottles of Beer Methods

We compute a few verses of the Bottles of Beer song using Method paragraphs as both producers and consumers of

First we define some quantities through givens and simple operations on them.

99 Bottles of Beer on the Wall

-1 Take One Down Pass it Around 98Bottles of Beer on the Wall *

-1 Take One Down Pass it Around 97Bottles of Beer on the Wall * Then we retrieve water and continue

Welcome Visitors

Welcome to the Smallest Federated Wiki. You may be seeing this page because you have just entered a wiki of your own. If so, you have three things to do before you go_ on.

One: Create a page about yourself.

Ward Cunningham

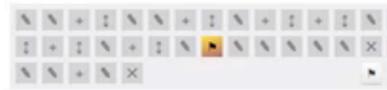
Two: Create a page about things you do on this wiki.

OSCON 2012 Demo Pages

Three: Look for the claim button below this page.

This site has already been claimed. You don't need to log Your changes will be saved in your own browser.

Start writing. Click either link. Press [+] to add more writing spaces. Read How to Wiki for more ideas.



OC BY-SA 3.0 . JSON











a calculation looks up and to the left for data.

interacting with things

a plugin interprets markup as a domain specific language.

a plugin can delegate to a serverresident handler to complete its interpretation.

good time for a demonstration



We can read from and write small Txtzyme programs on federated wiki servers. This language with words for ru results over dedicated soc

Here is a program that will microcontroller is connec answer. The plugin runs t opened and then reports

OPEN _What Version

The report might say "c possible. Or just "1 ser



More Txtzyme Examples

We will show how features of Txtzyme work with features of the Txtzyme plugin to do some interesting things with little or no additional hardware.

In Wiki

Txtzyme Blink is the Hello World of microcontroller circuits. We blink once a second and whenever the thumb event triggers.

Txtzyme Morse Code using just macro expansion with no arguments. Good test for



Txtzyme running on Teensy 2 driven by Raspberry Pi running

Txtzyme Oscilloscope extzyme to read an analog input and report what it to wiki. We'll pulse a piezoelectric speaker on then observe the signal it produces as it rings

52 uu 0oi 50 {11sp 100u}

sample shows in the status linke. Click

D3 Line.

ULSE then to slowly





a plugin interprets markup as a domain specific language.

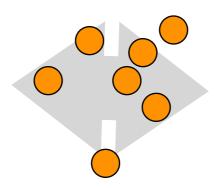
a plugin can delegate to a serverresident handler to complete its interpretation.

communities of purpose

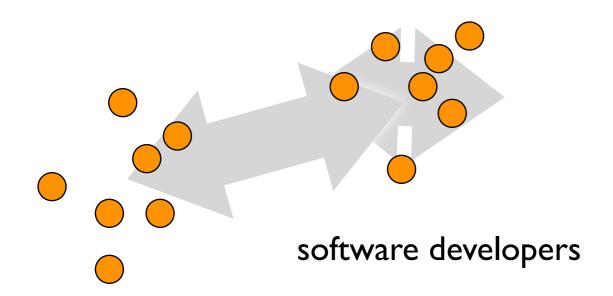
organizational communication, urban planning, collaborative research, sensor networks, quantified self, legacy wikis and history of computing.

overlapping communities that comprise a productive ecosystem.

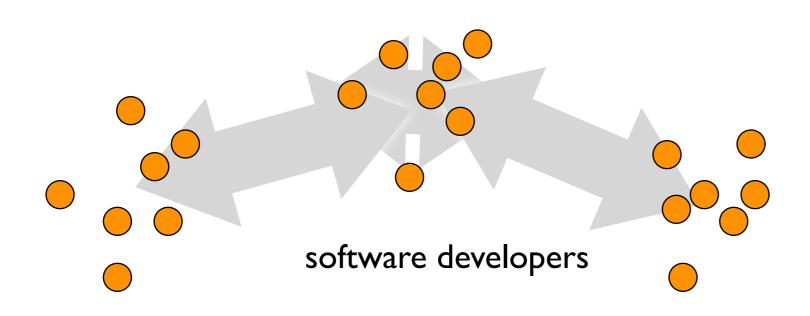
many dimensions deserving of interpretation among people who may not be friends.



software developers

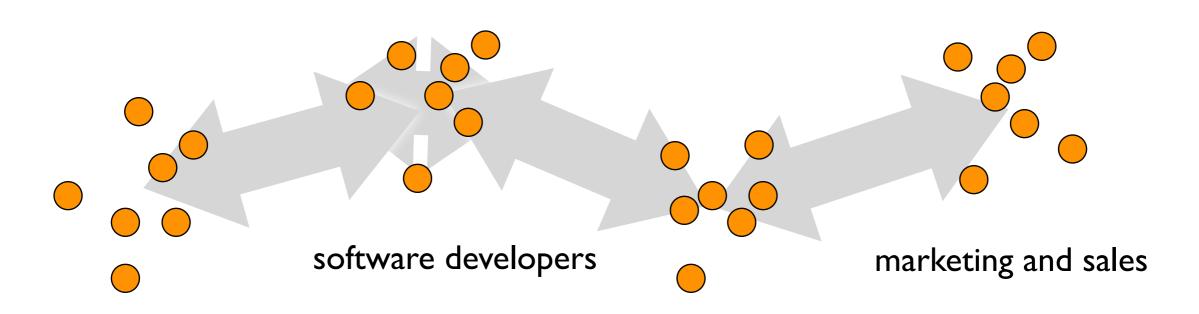


computer operations



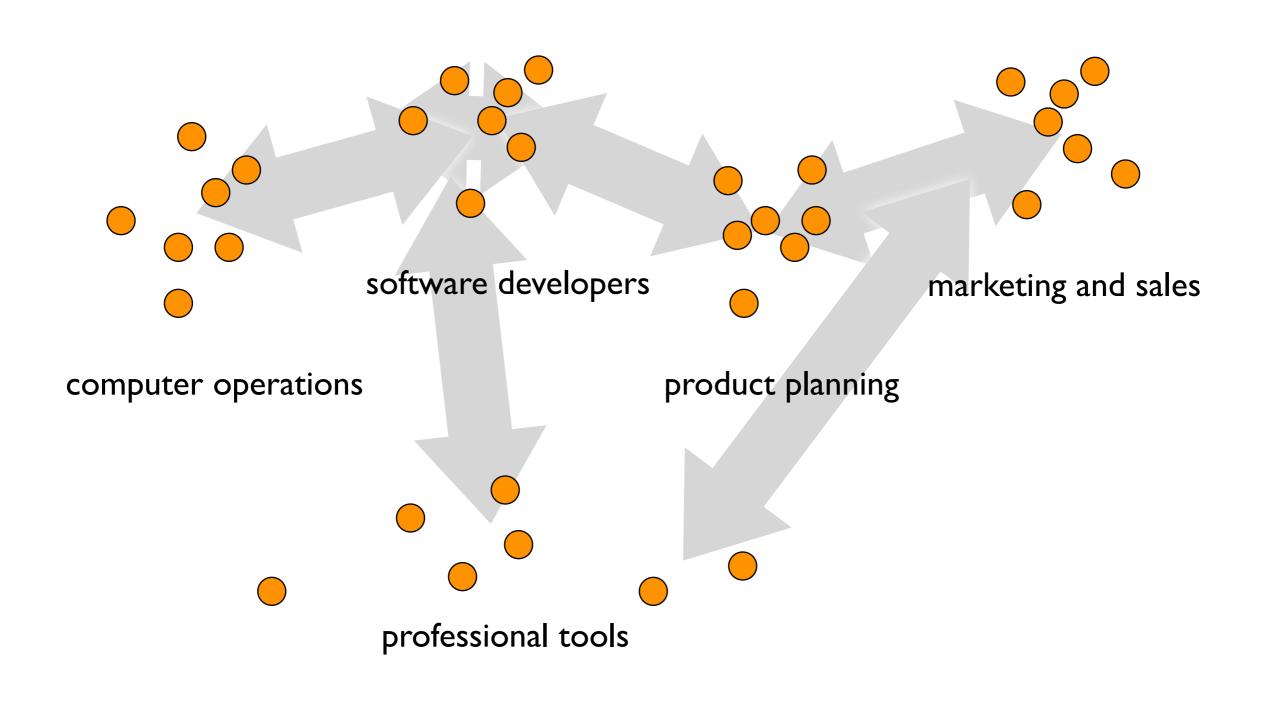
computer operations

product planning



computer operations

product planning



organizational communication as a chorus of voices management software developers marketing and sales product planning computer operations professional tools



compute

PiFi Wiki Report

In this report we will track our progress configuring and then distributing Smallest Federated Wiki for the Raspberry Pi. We'll also repeat reports we hear of people putting our new wiki to use on the platform.

reporting DAILY for 1 recipients in 107 minutes reporting WEEKLY for 5 recipients in 13 hours

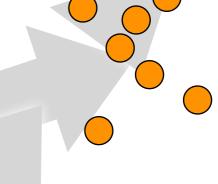
We've got the First Node Version Installed without knowing much about Pi, Debian or Node. We're still struggling with a few details, most troublesome is resolving openId logins.

We've shown we can Blink the OK LED using writes to /sys files. We're using this as a general health indicator as we debug networking problems with our headless board.

We've noticed periods of intense packet collisions on our home network. We're Logging Data in wiki from continuous pings on several machines.

We're using some of the very first and nearly forgotten federated wiki data visualizations written 18 months ago. We took the time to bring these up to date.

Why call this DiFi Wiki? The platform combination is the sum name. We like saying it. management



marketing and sales

inning

organizational communication as a chorus of voices



compute

PiFi Wiki Report

In this report we will track our progress configuring and then distributing Smallest Federated Wiki for the Raspberry Pi. We'll also repeat reports we hear of people putting our new wiki to use on the platform.

DAILY EVENING ward@c2.com

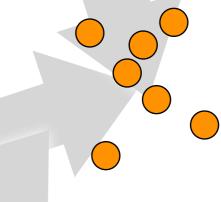
weekly friday morning steve@holdenweb.com kirby.urner@gmail.com ward@c2.com sam@newrelic.com

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management



marketing and sales

inning

organizational communication as a chorus of voices





In this report we will track our progress configuration then distributing Smallest Federated Wiki for the then distributing Smallest Federated With the distribution of the dis

DAILY EVENING ward@c2.com

compute

WEEKLY FRIDAY MORNING steve@holdenweb.com kirby.urner@gmail.com ward@c2.com sam@newrelic.com

We've got the First Node Version Inst knowing much about Pi, Debian or N struggling with a few details, most to resolving openId logins.

We've shown we can Blink the Or

We've noticed periods of intens notwork We're Logging NEW

From: Ward Cunningham Subject: PiFi Wiki Report (WEEKLY)

Date: January 4, 2013 6:00:00 AM PST

To: Steve Holden, kirby urner, Ward Cunningham

Published WEEKLY from Federated Wiki

NEW

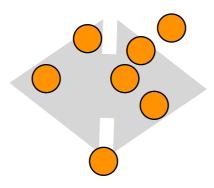
In this report we will track our progress configuring and then distributing [[Smallest Federated Wiki]] for the Raspberry Pi. We'll also repeat reports we hear of people putting our new wiki to use on the platform.

NEW

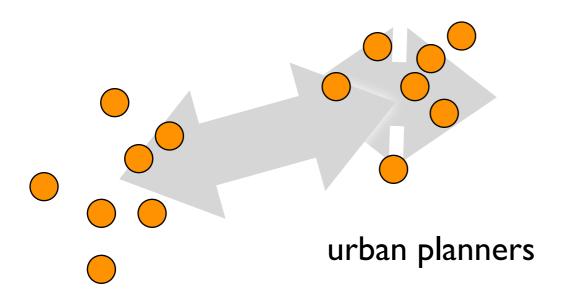
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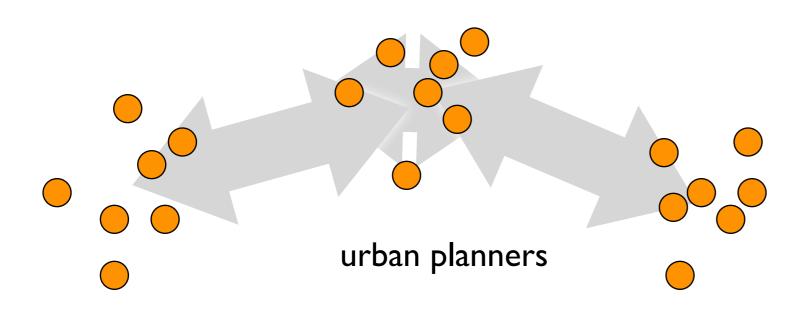
We've shown we can [[Blink the OK LED]] using We've shown we can writes as a gwrites to /sys files. We're using this as a gwrites to /sys files. This is important because its a control paradigm that is well aligned with



urban planners

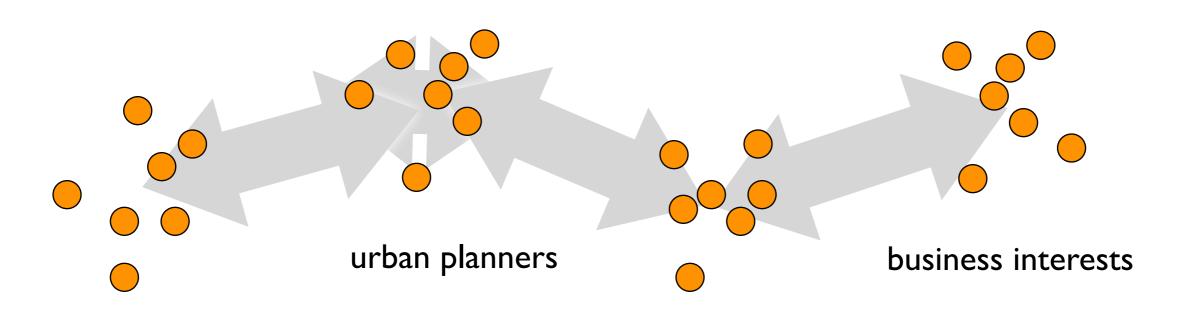


property developers



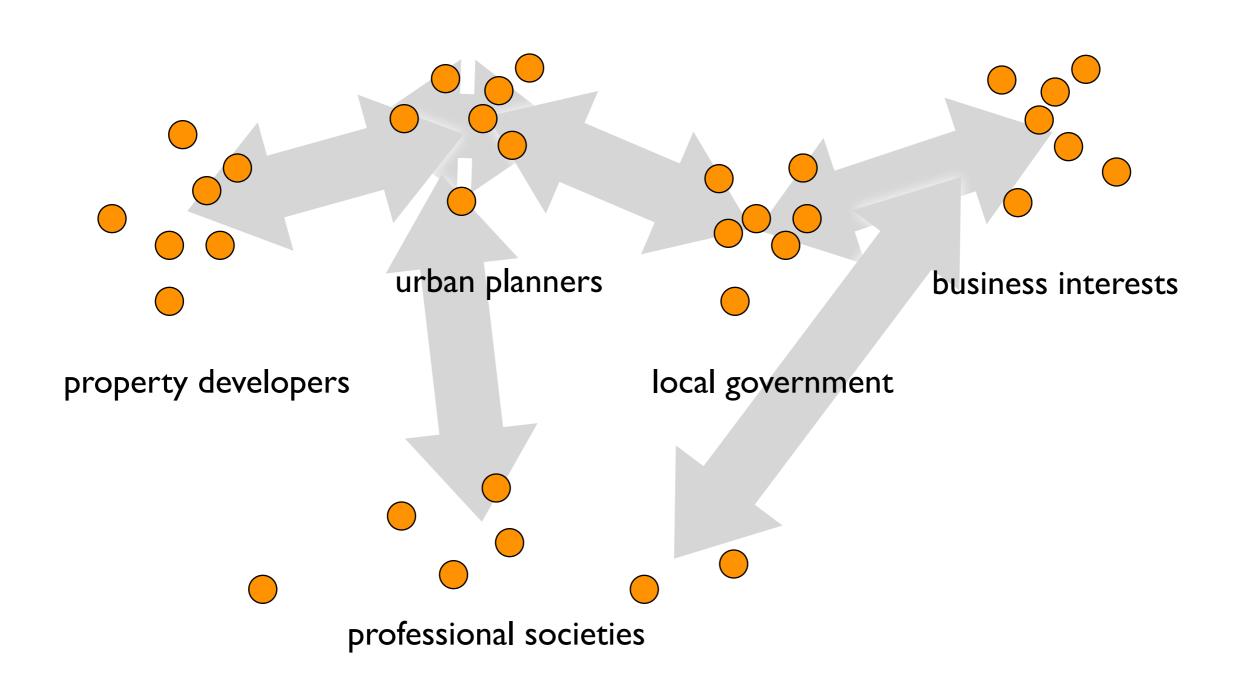
property developers

local government

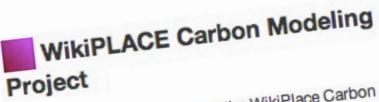


property developers

local government



urban planning as & chorus of voices citizen activists urban planners business interests property developers local government professional societies



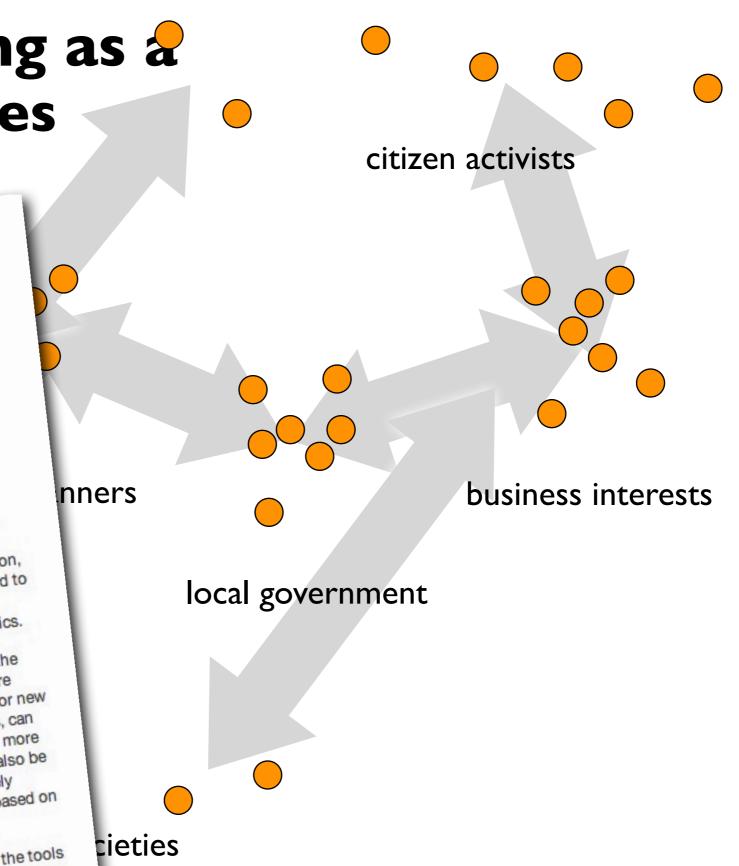
Welcome to the start page for the WikiPlace Carbon Modeling Project. If you want to jump into a demonstration, click on this link:

Residential Neighborhood

Or to learn more, just keep reading!

This module has several notable features:

- It tracks performance metrics for variables like cost, savings, tax cost, resource use, and greenhouse gas emissions. As you work with several tools in combination, you can see how these metrics are likely to perform, and to change based on your choices. In this way, Build Tomorrow serves as a predictive model of these metrics.
 - It uses an advanced wiki format, which means that the information and resources can grow and become more accurate and useful. People who develop new tools, or new ways of using existing tools to achieve better results, can share that information, and others can thereby build more useful toolkits. Significant local improvements can also be uploaded to the main system, making it progressively smarter too. (This kind of improvement process is based on the Github open-source model of Linus Torvalds.)
 - It uses a pattern language format, which means the tools can interface with each other as elements of "objectoriented design." In plain language, the tools work together





Welcome to the start Modeling Project. If y demonstration, click

Residential Neighbo

Or to learn more, jus

This module has sev

- It tracks performal savings, tax cost, relemissions. As you veryou can see how the change based on your tomorrow serves a
 - It uses an advano information and reaccurate and useful ways of using exists share that informat useful toolkits. Siguploaded to the manarter too. (This the Github open-series)
 - It uses a pattern can interface with oriented design."

Residential Neighborhood

This is the Place Pattern for a neighborhood of homes. It establishes the characteristics of the homes within a residential neighborhood, and it allows you to see how changes are likely to affect its performance in a number of ways. These measurements are called metrics.



PLACE PATTERN for a neighborhood of homes

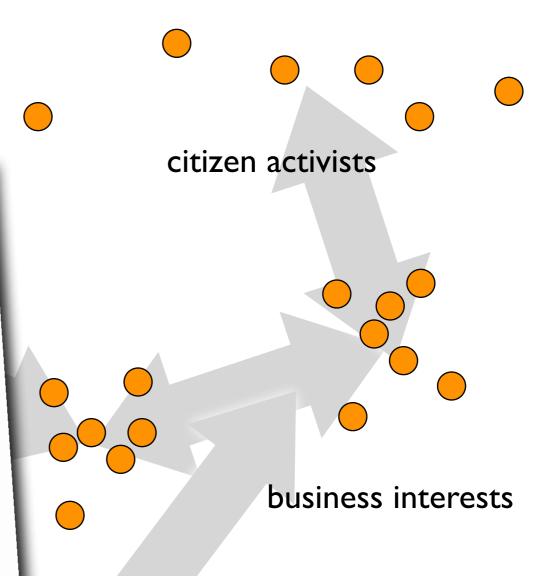
(NOTE: In the final version there will likely be several sections below folds, and GHG emissions will be one also tax revenue and other externalities.)

GREENHOUSE GAS EMISSIONS

How will the neighborhood likely perform on GHG emissions per person? To predict this, we start with a "baseline" of emissions per person. The number we have below, the average for the USA, is from the US Energy Information Agency website . NOTE: You can change this number if you have a more accurate one for your locality (this is called *local calibration*).

18MtCO2e per Person per Year

Now we set the number of persons per unit, and the required (or target) number of units. Go ahead and put in your own numbers, if you have them. But don't change "Persons" -- that will calculate for you the total number of persons living in your neighborhood.



al government





WikiPLAC Project

Welcome to the start Modeling Project. If y demonstration, click

Residential Neighbo

Or to learn more, jus

This module has sev

- It tracks performa savings, tax cost, re emissions. As you v you can see how th change based on yo Tomorrow serves a
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Residential

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(NOTE: In the final ver sections below folds, also tax revenue and

GREENHOUSE GAS

How will the neighbor emissions per perso "baseline" of emissi below, the average f Information Agency number if you have (this is called local

18MtCC

Now we set the nu required (or target your own number "Persons" -- that persons living in

Single Family Detached Residences

Many people want to live in residences surrounded by yards and gardens, and not touching other homes. Larger families with children especially find these homes desirable. These isolated structures are separated by lot boundaries with no shared services beyond the street.



Single Family Residences are desired by many people

GREENHOUSE GAS EMISSIONS

Single family residences tend to increase the level of greenhouse gas emissions per person. (But as we will see, there are other ways to lower it too, even with single family residences.)

To recap, the current baseline of GHG emissions per person is:

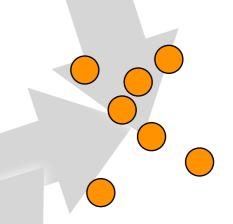
18MtCO2e per Person per Year

Here you can change the allocation of single family residences in your neighborhood:

> 2.5 Persons per Unit 50 Allocated Units 125 Persons in Single Family Residences

Now you have the number of persons living in single family residences. (You can change this if you want -- but it will override the number you had in the beginning)





business interests

ent



Welcome to the start Modeling Project. If y demonstration, click

Residential Neighbo

Or to learn more, jus

This module has sev

- It tracks performal savings, tax cost, relemissions. As you veryou can see how the change based on your tomorrow serves a
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(this is called local of the image of the image)

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Single Fan Residences

Many people want to residences surrounde yards and gardens, ar touching other home families with children especially find these desirable. These isola structures are separa lot boundaries with a services beyond the

GREENHOUSE GA

Single family reside greenhouse gas em there are other ways residences.)

To recap, the currer person is:

18MtCC

Here you can char residences in your

50 Allor

Now you have the residences. (You

Single Family Attached Residences

Many people do not want to care for large yards or pay the expense of a large lot. They prefer attached homes -- structures that share at least one wall with adjacent structures, and typically share sanitary and storm sewer services. Couples without children or with only one or two children, and those



Many people love the convenience of attached

whose children are grown, often prefer this kind of home, especially if it is in a walkable neighborhood.

GREENHOUSE GAS EMISSIONS

Attached residences tend to have lower emissions than single family (detached) residences, because their shared walls are more energy efficient. In addition, the yards tend to be smaller, requiring less water and other resources.

First, we apply a predictive delta to the baseline of GHG emissions per person. This number is an average of the difference that is predicted by empirical research [citation needed].

18MtCO2e per Person per Year 0.9 Factor 16.2MtCO2e per Person per Year *

Now we change the allocation of attached residences in the neighborhood:

ss interests



Residential

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Now you have th residences. (You

Single Fami Residences

Many people do not war care for large yards or expense of a large lot. prefer attached homes structures that share one wall with adjacen structures, and typic sanitary and storm s services. Couples with children or with only two children, and the whose children are especially if it is in

GREENHOUSE G

Attached residence single family (detained walls are more en to be smaller, rec

First, we apply a emissions per p difference that i needed].

> 18N 0.9F 16.21

Now we char the neighbor

Compact Neighborhood

One way to make a
neighborhood more efficient
-- and even more enjoyable to
live in -- is to reduce the
amount of land used by
residences. That will improve
energy efficiency, resource
use, and cost. It will also
allow people to walk more
easily, and see their
neighbors



Many people love to live in compact, walkable neighborhood.

GREENHOUSE GAS EMISSIONS

Homes in more compact neighborhoods tend to have lower emissions than those in other neighborhoods, because the yards are smaller, requiring less water and other resources. People also tend to drive less, and drive shorter distances.

First, we take a baseline of density, an average of many cities in the USA, 8 homes per acre.

8 Standard Density

Then we specify a factor to increase the density (as a baseline, 1.2, or 25% more dense). This number is applied difference that is predicted by empirical research [citation]

1.2Neighborhood Density Increase 8Standard Density

WikiPLAC Project

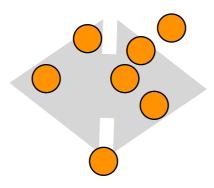
Welcome to the start Modeling Project. If y demonstration, click

Residential Neighbo

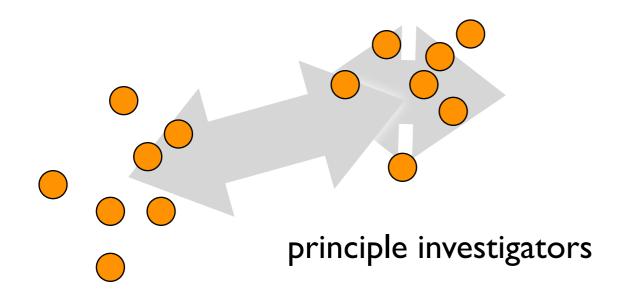
Or to learn more, jus

This module has sev

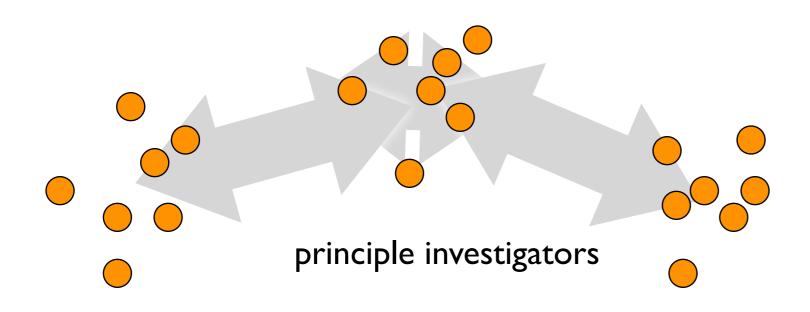
- It tracks performal savings, tax cost, relemissions. As you veryou can see how the change based on your tomorrow serves a
 - It uses an advano information and resaccurate and useful ways of using exists share that informatuseful toolkits. Signification of the management of the management of the Github open-series.
 - It uses a pattern can interface with oriented design."



principle investigators

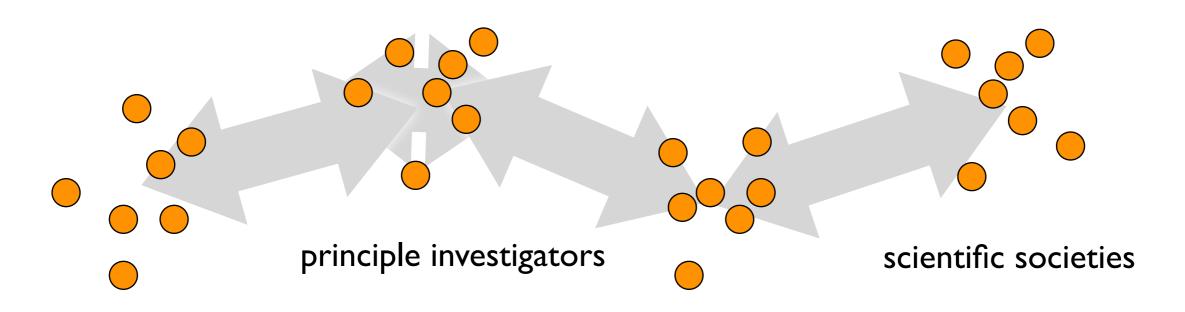


graduate students



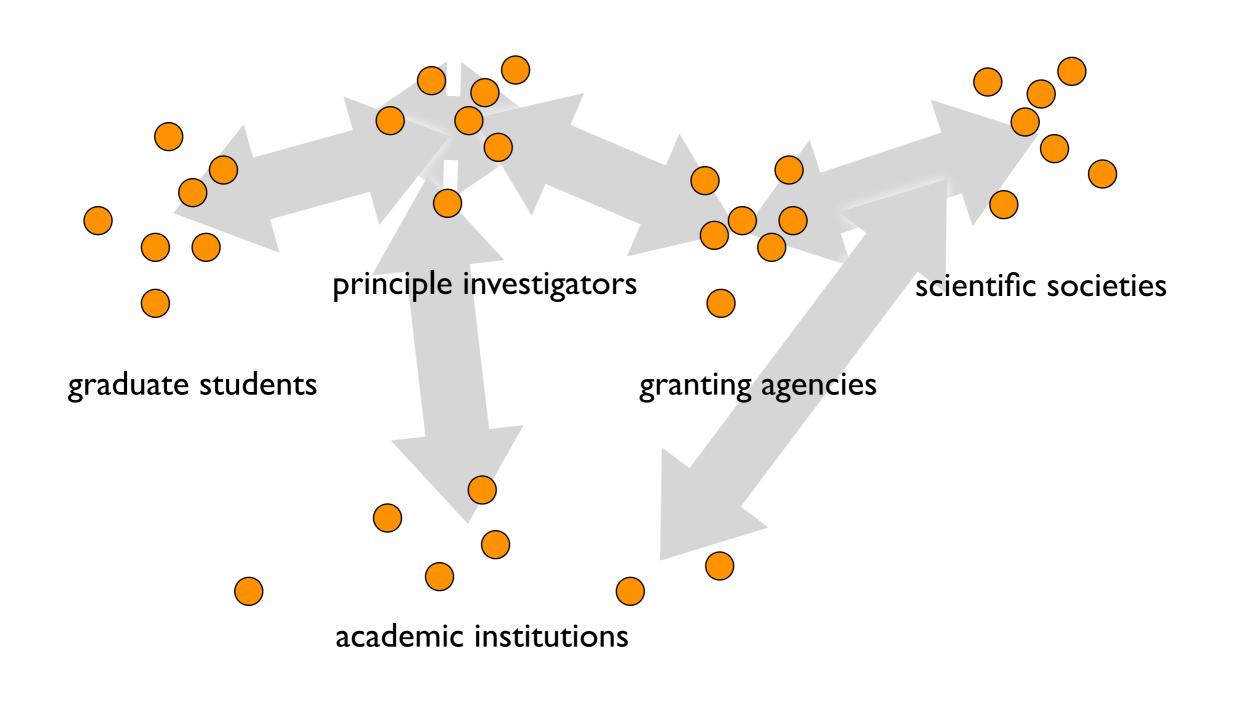
graduate students

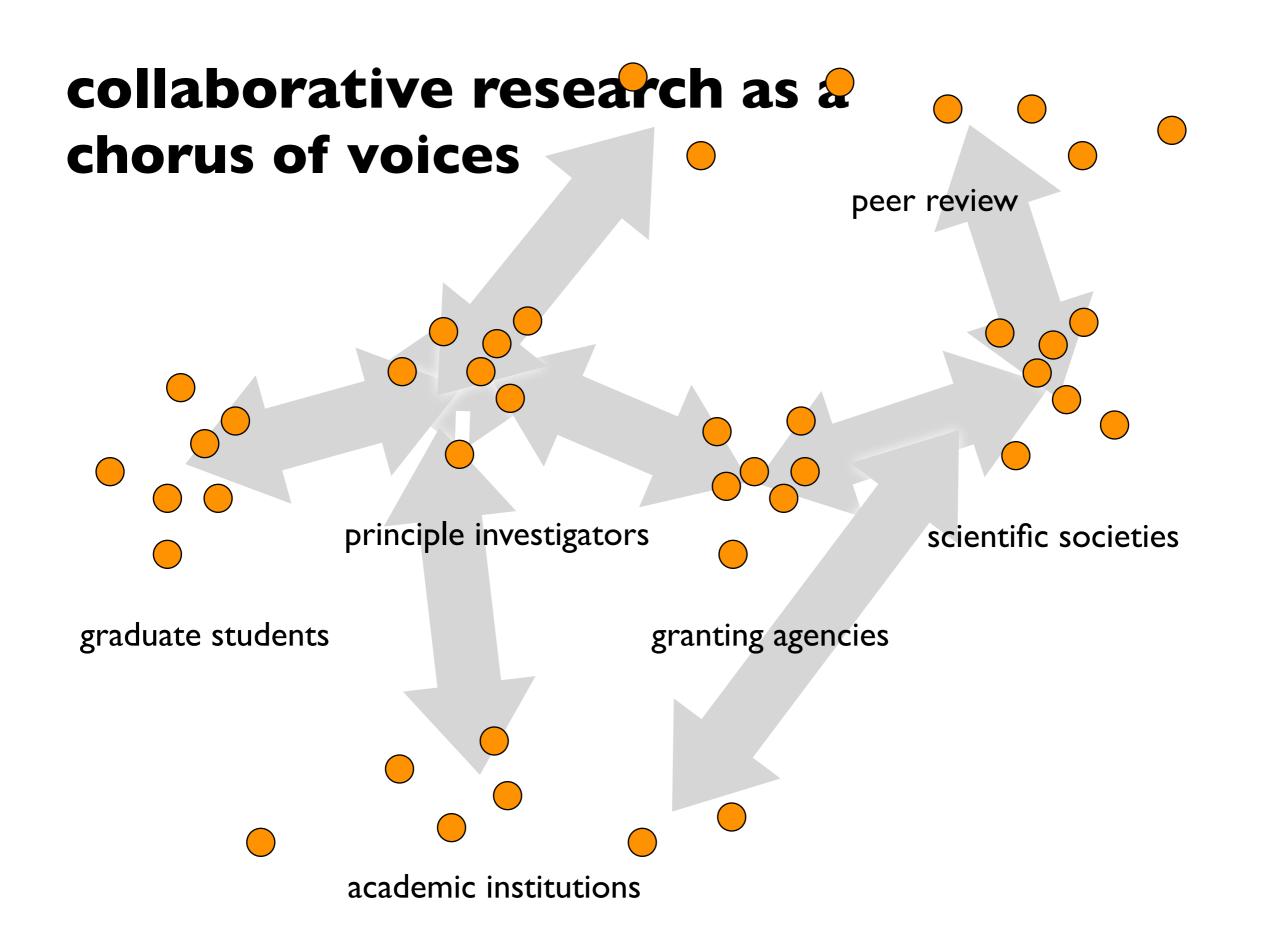
granting agencies



graduate students

granting agencies





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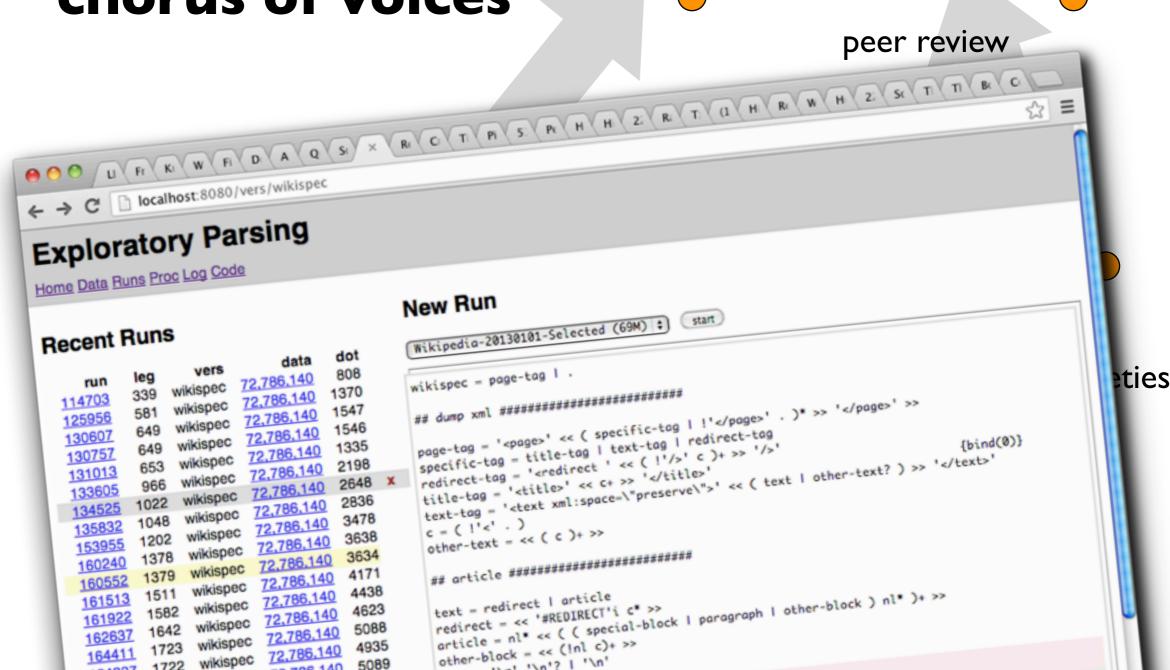
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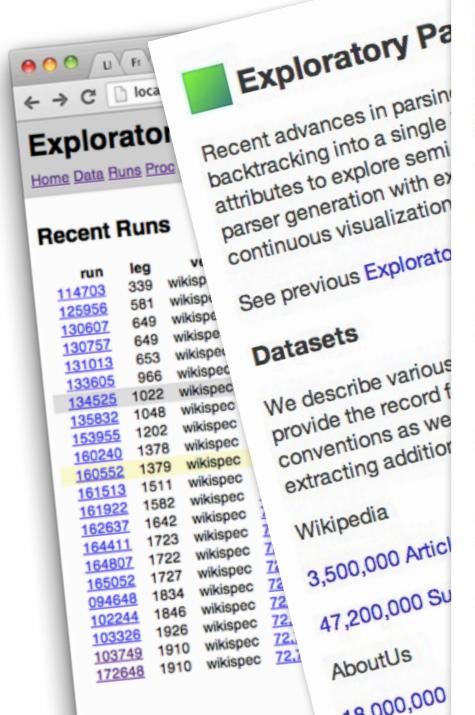
special-block = !.

paragraph = 1.

gt = '>'

- = [\t]*

collaborative research as & chorus of voices peer review W H Zi St TI TI Bt C **Exploratory Parsing** Recent advances in parsing combine context and backtracking into a single language. We use both attributes to explore semi-structured texts by supporting O O LI Fr ← → C D loca parser generation with experiment management and **Explorator** continuous visualization of partial results. Home Data Runs Proc See previous Exploratory Parsing Webapp. **Recent Runs** We describe various server-resident datasets. For each we eties leg run wikisp 339 114703 page>' >> wikisp 581 provide the record framing and information coding 125956 conventions as we know them and suggest approaches to wikispe 649 Datasets 130607 {bind(0)} wikispe 649 130757 t?) >> '</text>' wikisped 653 131013 wikisped 966 133605 1022 134525 extracting additional features. 1048 wikispec wikispec 3,500,000 Articles from English Wikipedia dump. ★ 1378 wikispec 1379 wikispec 1511 161513 wikispec 47,200,000 Surveys for wikipedia article quality. Wikipedia 1582 161922 wikispec 1642 wikispec wikispec 1722 164807 wikispec wikispec 1846 wikispec to one one AboutUs domain pages. 72. wikispec zone file scrape. AboutUs wikispec





3,500,000 Articles

We retrieved the English Wikipedia current-articles-only xml dump sometime in 2011. We extract title and text elements for each article. We'll develop a variety of useful parsers while we understand there is no reliable spec for markup. wikipedia

```
dump-xml = page-tag | .
page-tag =
   '<page>'
   << ( specific-tag | !'</page>' . )* >>
   '</page>'

specific-tag = title-tag | text-tag
title-tag =
   '<title>'
   << ( !'<' . )+ >>
   '</title>'

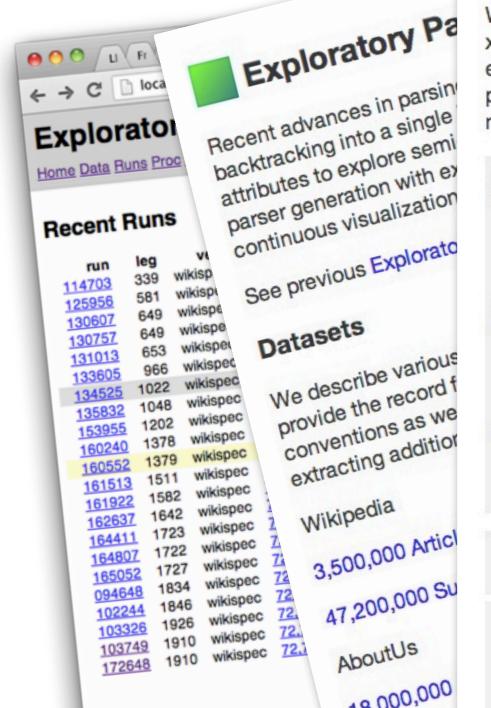
text-tag =
   '<text xml:space=\"preserve\">'
   << wikitext >>
   '</text>'</text>'
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eties

```
Start Parse

state stopped
server closed

Discard Parse
```





3,500,000 Artic

We retrieved the English W xml dump sometime in 20 elements for each article. parsers while we underst markup, wikipedia 🗗

```
dump-xml = page-tag
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  '<page>'
  << ( specific-ta
  '</page>'
specific-tag = ti
title-tag =
  '<title>'
 << ( !'<' . )+
  '</title>'
```

text-tag = '<text xml:s << wikitext

'</text>'

Start Tags

We look for start tags and then observe how arguments are used in specific cases.

We look for begin tags, possibly with arguments, and complete the parse when we find them.

```
html-document = << html-markup+ >>
   html-markup = tag | end-tag | other-text |
  tag = << ( familiar-tag | other-tag ) >>
  end-tag = << '</' [a-zA-Z]+ '>' >>
 tag-arguments = << (!'>' ch)+ >>
other-tag = << '<' [a-zA-Z]+ tag-arguments? '>' >>
other-text = << '<'* (1'<' ch)+ >>
```

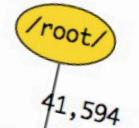
Results

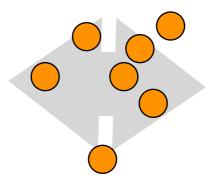
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	0m0.900s

Start Parse

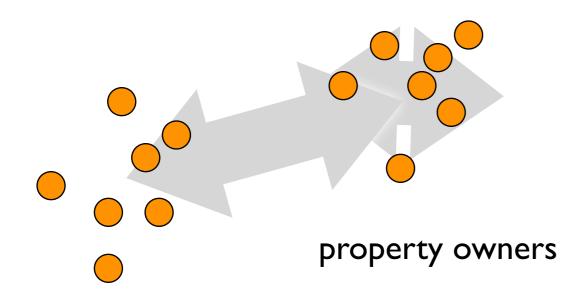
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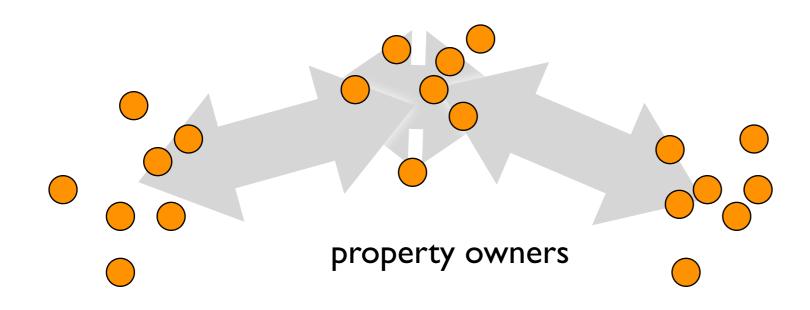




property owners

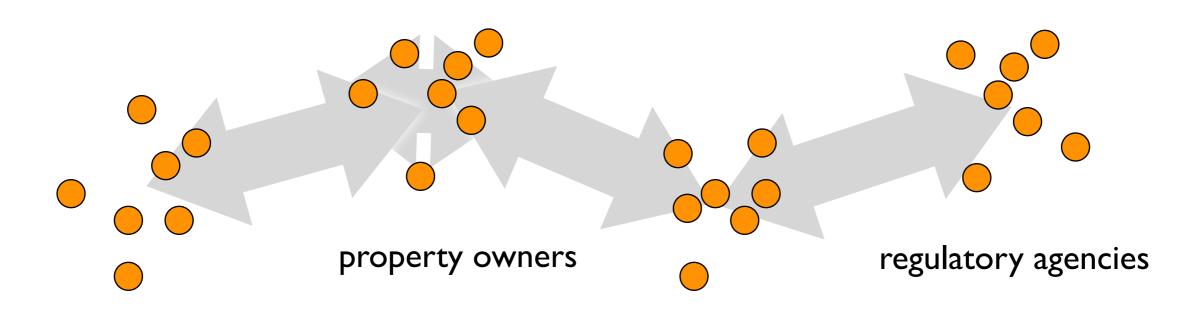


equipment suppliers



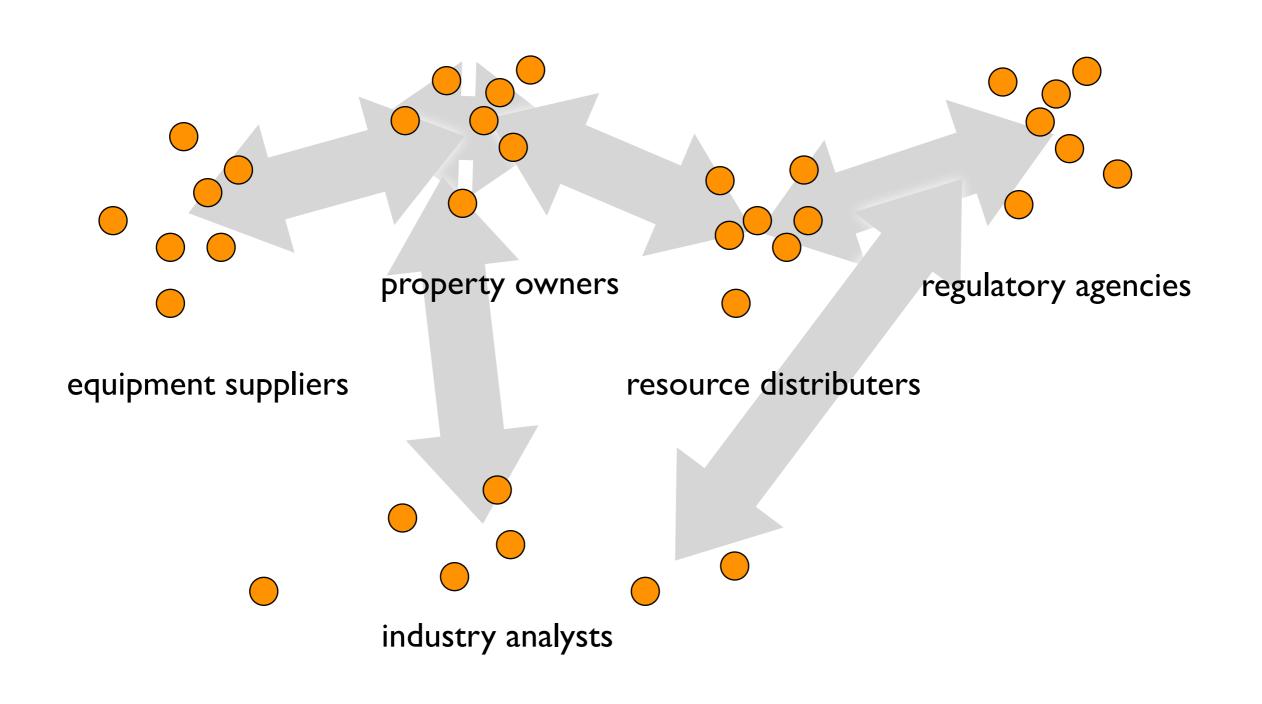
equipment suppliers

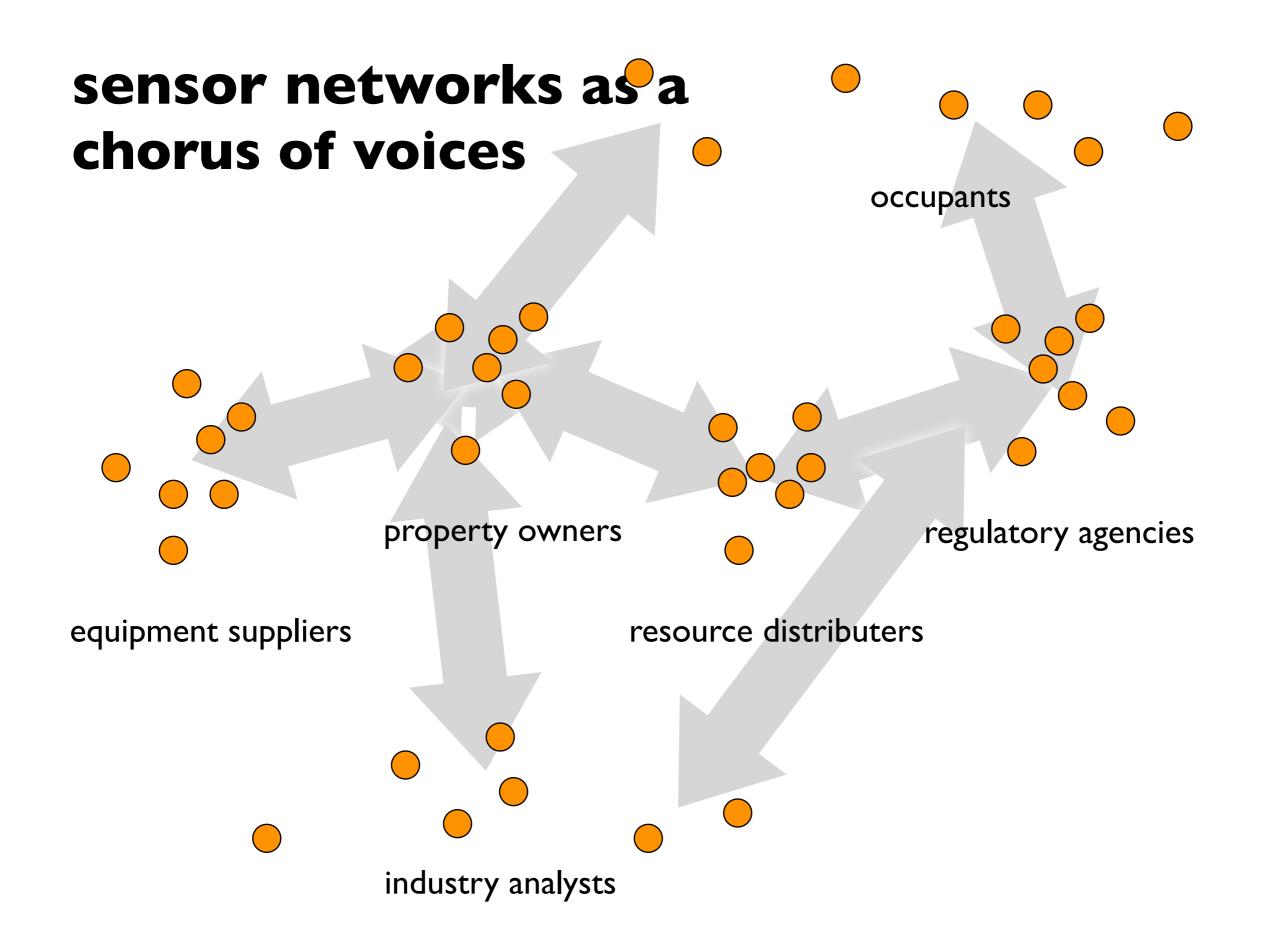
resource distributers



equipment suppliers

resource distributers







Here we report the air temperature measured in Ward Cunningham's back yard. The thermometer is placed 18 inches from the

sensor from morning sun except for an hour or two mideast-facing lower-level of the morning. More elaborate reporting can be found in Ward's house. Trees shade the

SensorServer @ site.

Try rendering with D3 Line.

This page includes a chart item that contains a time series of data samples, the most recent of which is shown in the readout. The time series is updated by a cron script. The script transmits a Txtzyme program over USB to an vence of digital thermometer over their attached Teensy micro-This program

8.00

12:00 PM 16 Sep 2011

Sensor placement

analated to Fahrenheit by

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regulatory agencies

occupants

resource distributers

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12:00 PM

16 Sep 2011



gencies

Air Temperature

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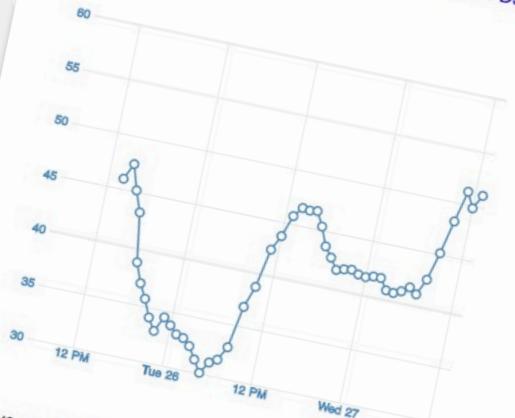
Try rendering with D3 Line.

This page includes a chart
item that contains a time
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series of data samples, the
most recent of which is shown
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in the readout. The time series
in the readout. The time series
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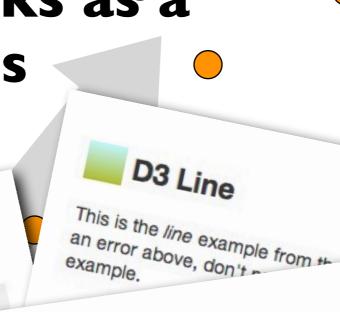


This is the line example from the d3 distribution. If you see example.

A distribution of the example from the d3 distribution. If you see example.



We've modified the example to retrieve data from the page that contains it. We start by searching the page. Failing that, sources are present.



Air Temperature

Here we report the air temperature measured in Ward Cunningham's back yard. The thermometer is placed 18 inches from the east-facing lower-level of the

sensor from morning sun except for an hour or tw morning. More elaborate reporting can be found house. Trees shade the SensorServer @ site.

Try rendering with D3 Line.

This page includes a chart item that contains a time series of data samples, the most recent of which is shown in the readout. The time series is updated by a cron script. The script transmits a Txtzyme program over USB to an attached Teensy micro-This program 1000 @ digit

60.

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12:00 PM 16 Sep 201

Txtzyme Oscilloscope We use Txtzyme to read an analog input and report what it finds back to wiki. We'll pulse a piezoelectric speaker on pin 4d and then observe the signal it produces as it rings like a bell. wikipedia @

4d 1o 50u 22 uu 0oi 50 {11sp 100u}

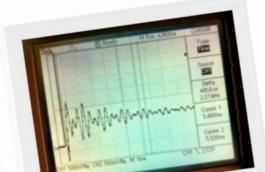
16 sent 776 rovd 168

The most recent sample shows in the status linke. Click rcvd to see more analog samples.

Try rendering with D3 Line.

On SECOND we PULSE then SAMPLE. We use the seconds argument to slowly lengthen the pulse.

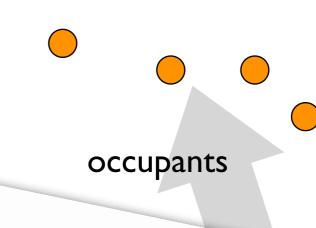
-- un to send a



ou see 3 Bars

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D3 Line

an error above, don't

Txtzyme Oscilloscope

example.

This is the line example from the

4d 10 50u 22 uu 0oi 50 {11sp 10

16 sent 776 rcs

50

The most recent sample show rcvd to see more analog sam

Try rendering with D3 Line.

On SECOND we PULSE ! SAMPLE. We use the seconds argument to s lengthen the pulse.

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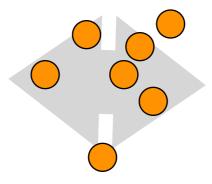
D3 Line

an error above, don't panic, keep reading. See also D3 Bars

you see 3 Bars

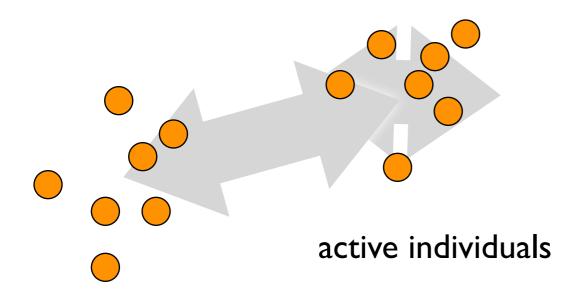
250 150 100

quantified self as a chorus of voices



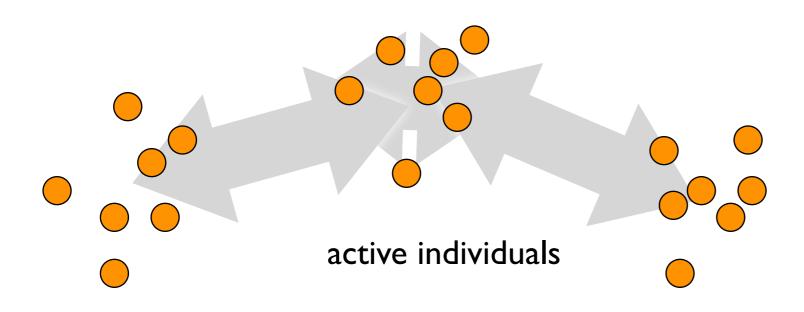
active individuals

quantified self as a chorus of voices



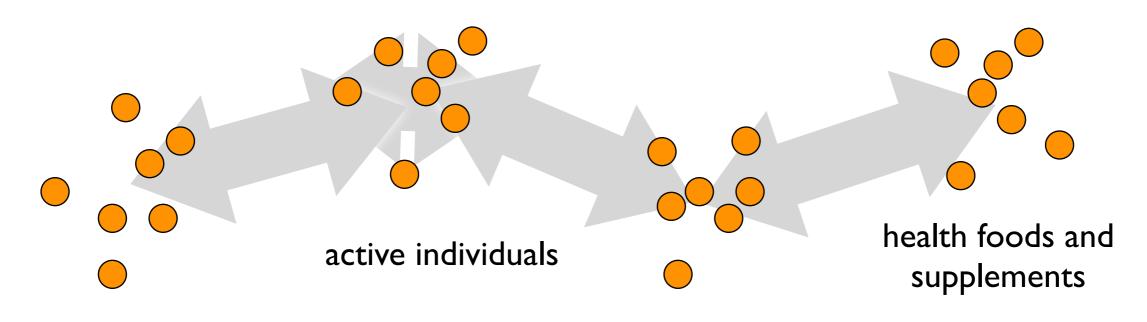
sport and wellness authors

quantified self as a chorus of voices



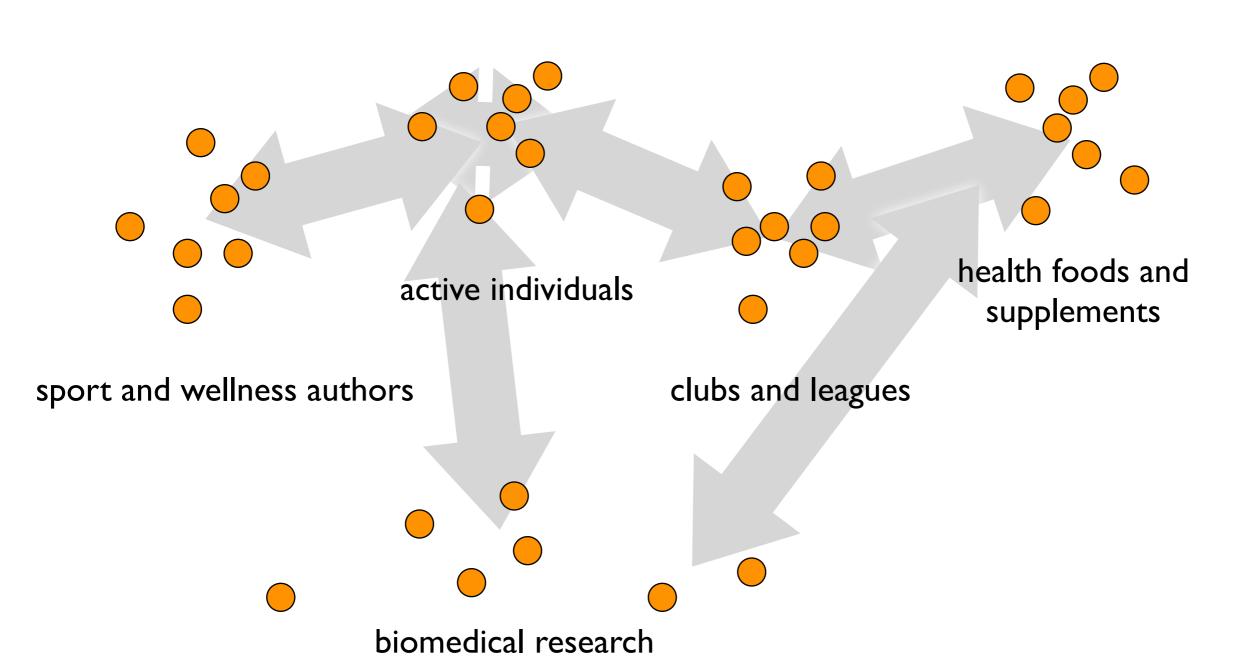
sport and wellness authors

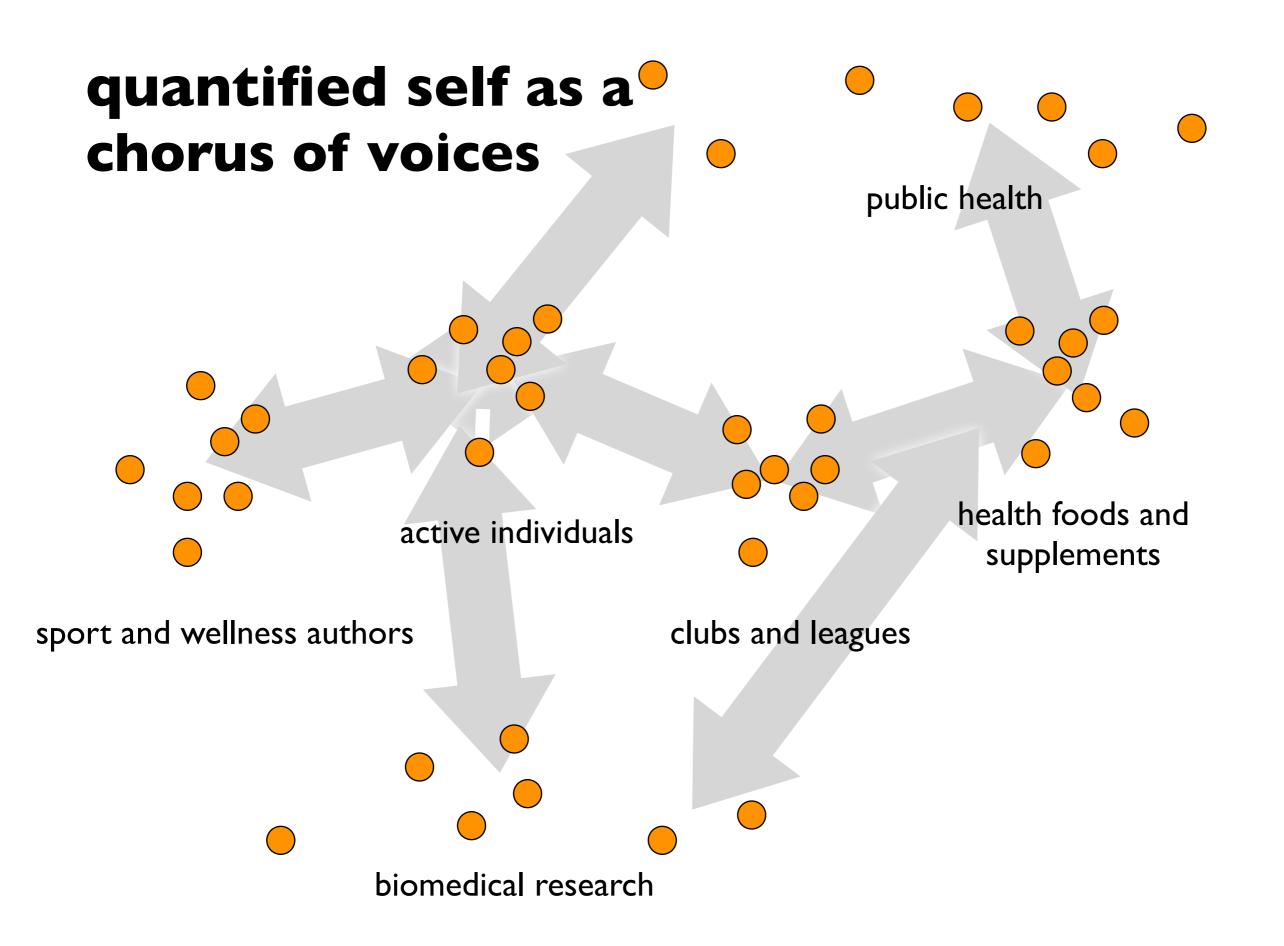
clubs and leagues



sport and wellness authors

clubs and leagues







sport

Weight Change Calculator

We will develop a wiki based calculator that will be useful for Projecting Weight Loss after a step-change in caloric balance. We hope to improve the utility of a bathroom scale while offering insight and encouragement to those who aspire to eat differently.

Our strategy is to capture data measurements while there is still enthusiasm for a change in habit. Then, with interactive modeling of the changing rate of change, we will produce encouraging numbers that respond appropriately to small fluctuations.

We are currently using a spreadsheet model. With each new measurement we perform three steps that we would prefer to see done here.

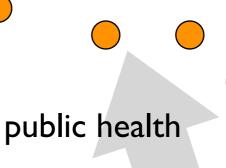
Record the data to 0.2 pound resolution.

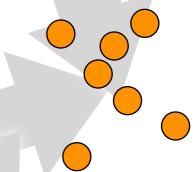
Adjust the presumed Asymptotic Weight to achieve the straightest accepte curve plotting Loss usmic scale.



health foods and supplements

and leagues









We will develop a wiki be for Projecting Weight Los balance. We hope to in scale while offering insection who aspire to eat difference.

Our strategy is to cap is still enthusiasm for interactive modeling will produce encourappropriately to small

sport

We are currently us new measurement prefer to see done

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Metabolic Equivalent of Task

The metabolic equivalent of task (MET), or simply metabolic equivalent ☑, is a physiological measure expressing the energy cost of physical activities.

823x4

2011 Compendium of Physical Activities ☑

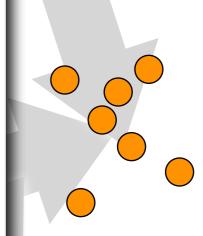
See Metabolic Calculator.

One MET is defined as the ratio of metabolic rate (and therefore the rate of energy consumption) during a specific physical activity to a reference metabolic rate, set by convention to:

- 3.5 ml O2·kg⁻¹·min⁻¹ or equivalently
- 1 kcal·kg⁻¹· h⁻¹ or
- 4.184 kJ·kg⁻¹· h⁻¹

Originally, a MET of 1.0 was considered as the resting metabolic rate @ (RMR) obtained during quiet sitting. MET values of activities range from 0.9 (sleeping) to 18 (running at 17.5 km/h or a 5:31 mile pace).

The Compendium of Physical Activities was developed for use in epidemiologic studies to standardize the



nealth foods and supplements



We will develop a wiki b for Projecting Weight Lo balance. We hope to in scale while offering ins who aspire to eat diffe

Our strategy is to cap is still enthusiasm for interactive modeling will produce encour appropriately to sm

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- 4.184 kJ·kg⁻¹· h⁻¹

Originally, a MET of 1.0 metabolic rate @ (RMR) values of activities rand at 17.5 km/h or a 5:31 i

The Compendium of F for use in epidemiolog aggingment of MET is



Metabolic Calculator

You lead an active life. How active? Here we compute your daily average activity as a multiple of an idle-hour.

blic health

A sedentary person could expect an average of a little less than 24 idle-hours of activity per day. (Sleeping takes less energy than idle waking.)

A vigorously active person might average 48 idle-hours a day. That's two days of basal metabolic calories @ every day. Enjoy seconds every meal.

			every
y	Physical Activities		
9	child		
	computer office	8	
	19 Ilewens		7.6
	'9 cdi "	8	12
	driving automobile	1	1.3
	slow bicycling	2	3
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	bicycling racing *	0.75	1.25
	LIVIAINDER	0.2	5.1
-	SUM	0.2	3.2
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37

Try rendering these numbers in Compare with



We will develop a wiki b for Projecting Weight Lo balance. We hope to in scale while offering ins who aspire to eat diffe

Our strategy is to cap is still enthusiasm for interactive modeling will produce encour appropriately to sm

We are currently us new measurement prefer to see done

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every day. Enjoy seconds every meal. 8 sleeping

8 computer office work 1 reading newspaper

2 sitting eat

.5 driving automobile

.75 slow bicycling

.2 bicycling racing REMAINDER

SIIM

Try rendering these numbers in a D3 Radar Chart. Compare with Metabolic Goals.

The metabolic calculator tallies idle-equivalent rates from the Metabolic Equivalent of Task database and scales them by the average hours/day vous REMAINIDES

sport



We will develop a wiki b for Projecting Weight Lo balance. We hope to in scale while offering ins who aspire to eat diffe

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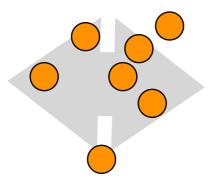
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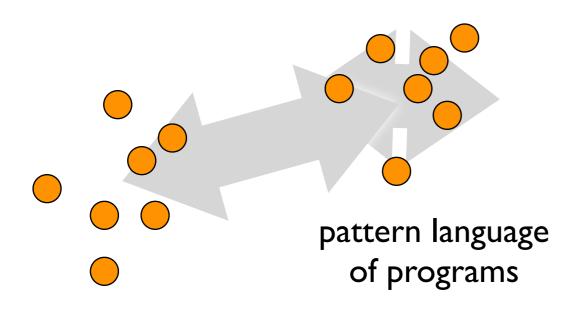
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	driving aut	1	1.3
	driving automobile	2	3
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	bicycling racing *	0.75	1.25
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	SUM	0.2	3.2
			3.55

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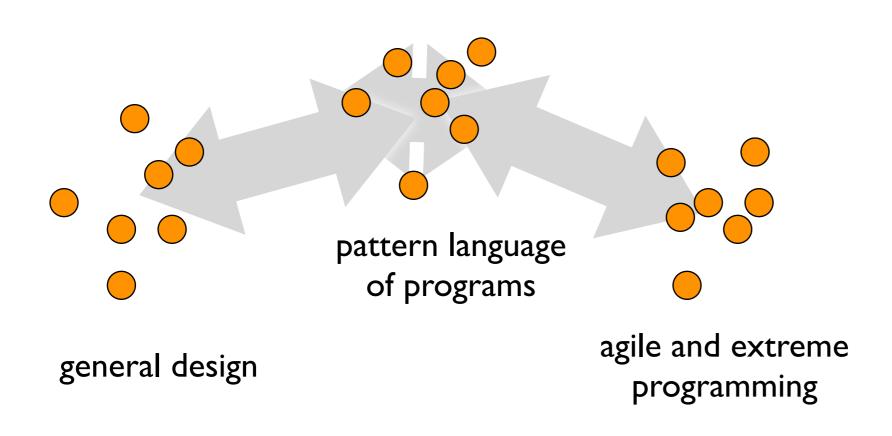
Try rendering these numbers in Compare

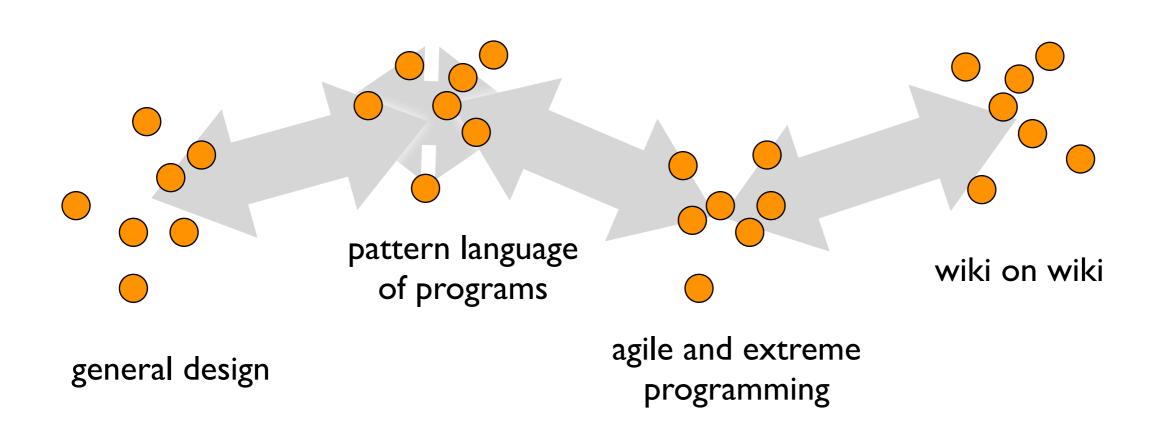


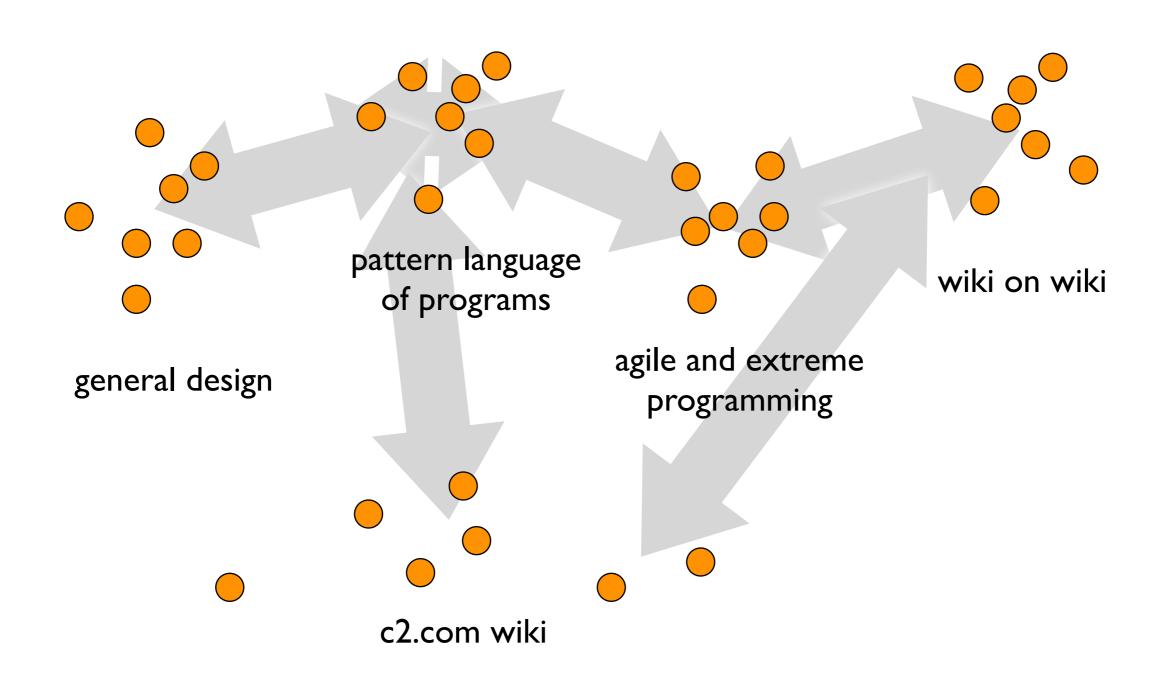
pattern language of programs



general design







legacy wikis as a chorus of voices blogosphere pattern language wiki on wiki of programs agile and extreme general design programming c2.com wiki



C2 Wiki Federation

We will invite people to refactor content from Wards Wiki and track their progress here. This is an experiment. If successful, something like this will become the whole wiki going forward.

Read about Acquiring Mastery of our subject and its expression in this new form.

See C2 Wiki Neighbors to add their activities to this integrated list of changes.

We occasionally meet for video chats. hangout ₪

Within a Month



C2 Wiki Migration Report

Within a Season

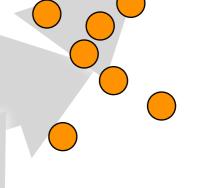


Ward Cunningham

Interesting Pages

Things Not Addressed Much In Agile

blogosphere



wiki on wiki

nd extreme ramming





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Within a Month

C2 Wiki Migration Rep

Within a Season

How To Wiki
Recent Submission
Learn Wiki by Doing
Ward Cunningham
Interesting Pages
Things Not Address

C2 Wiki Neighbors

You can browse from here to see what individuals are doing to migrate Wards Wiki to a federation of their own making. Just looking at this page will add their work to to your search neighborhood.

Donald Noyes

Donald Noyes, began as member of this Wards Original Wiki when it had less than 20000 pages, always busy Doing Stuff 20130224

Michael Kelley Harris

Developing lean startup content.

Sunir Shah

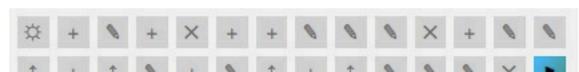
Started Meatball and other cool things.

Donald Noyes

Presently involved in a project designed to produce a refactoring of C2 Wards Wiki into a federation wiki.

Ron Jeffries

Ron was instrumental on the C3 project that brought XP into the world.



on wiki



hlogosphere



We will invite people to refactor and track their progress here. T successful, something like this going forward.

Read about Acquiring Master expression in this new form.

See C2 Wiki Neighbors to ac integrated list of changes.

We occasionally meet for v

Within a Month

C2 Wiki Migration Rep

Within a Season

How To Wiki Recent Submissi Learn Wiki by Doing Ward Cunningham Interesting Pages Things Not Addres



C2 Wiki Neig

You can browse from her to migrate Wards Wiki to Just looking at this page search neighborhood.

Donald Noves

Donald Noves, began Wiki when it had less t Stuff 20130224

Michael Kelley Ha Developing lean star

Sunir Shah Started Meatball ar

Donald Noyes Presently involved refactoring of C2

Ron Jeffries Ron was instrun the world.





C2 Wiki Federation

We will invite people to refactor content from Wards Wiki and track their progress here. This is an experiment. If successful, something like this will become the whole wiki

Read about Acquiring Mastery of our subject and its expression in this new form.

See C2 Wiki Neighbors to add their activities to this integrated list of changes.

We occasionally meet for video chats. hangout ₽

Within a Minute

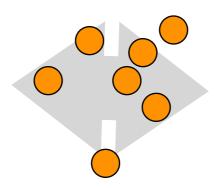
C2 Wiki Neighbors

Within an Hour

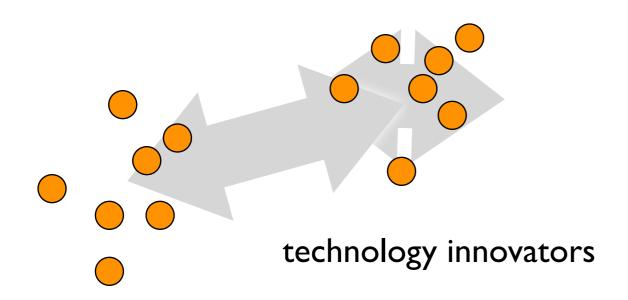
Wards Wiki

Within a Week

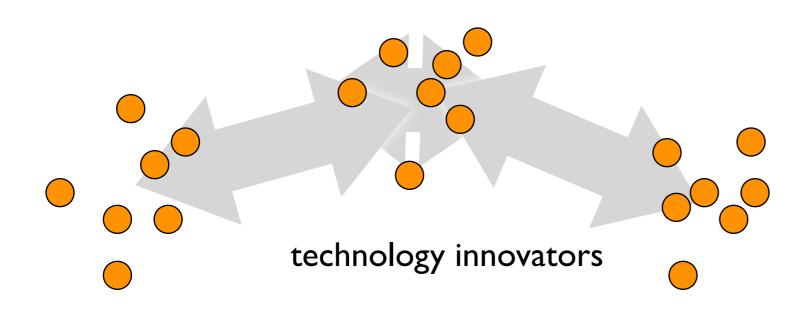
Category Wiki Collaboration Heat Death Of Mar



technology innovators

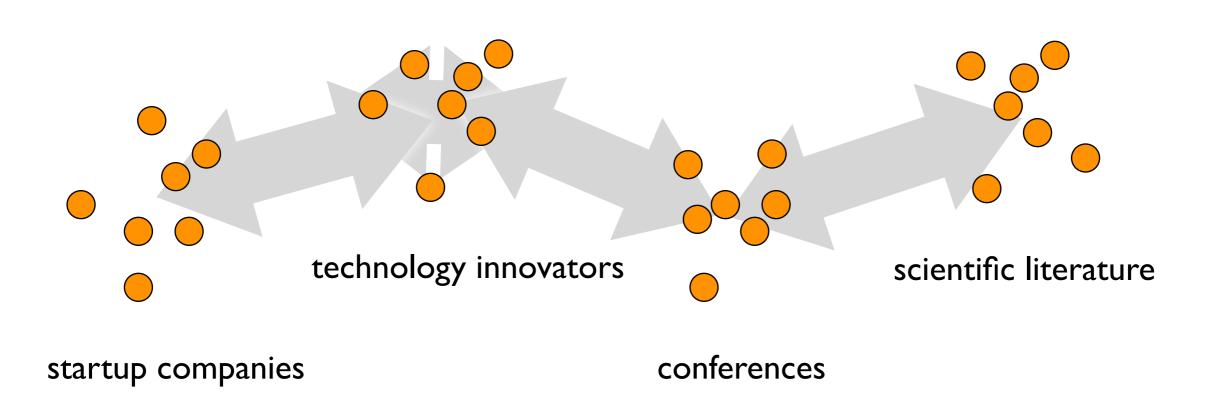


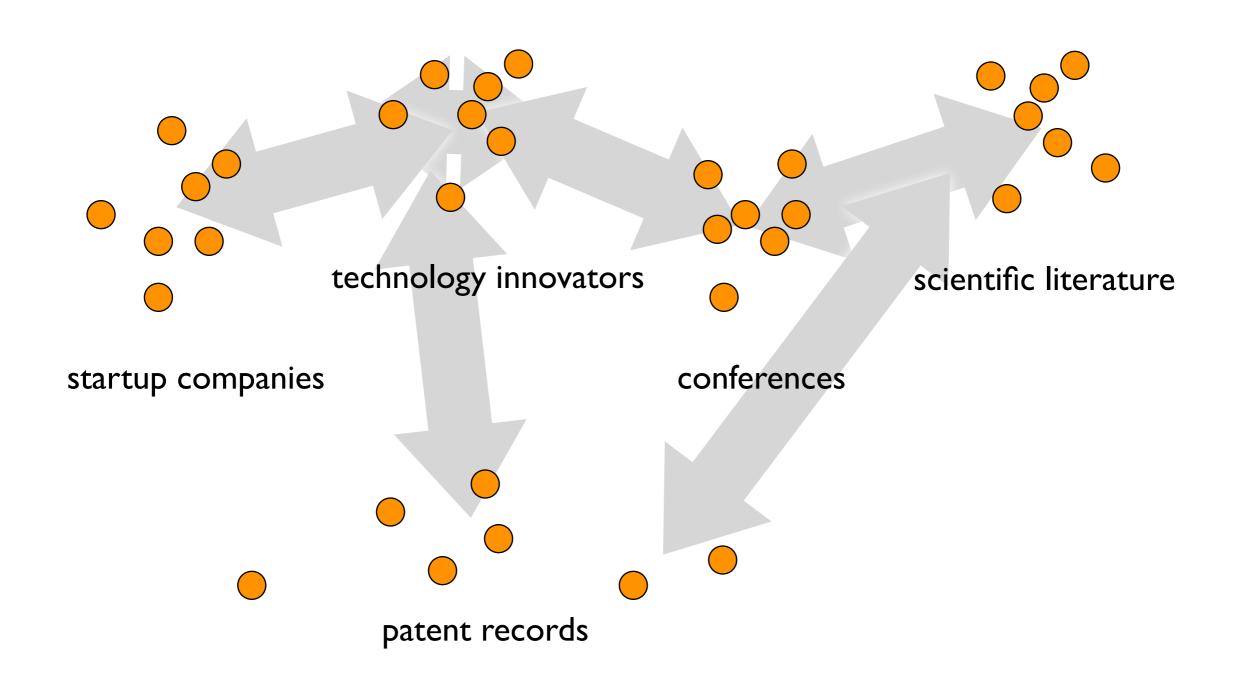
startup companies



startup companies

conferences





history of computing as a chorus of voices cultural history museums technology innovators scientific literature conferences startup companies patent records

history of computing as a chorus of voices cultural history museums



Original Dataset

These are both dumps from the Virtual Worlds timeline on that date. As I recall the RSS version is very primitive, just text, the JSON has all the metadata and links.

1x147

60023be4a37f6294

You can find the current version of the timeline at: nethistory.org , then click on 'view in dipity'.

Field Value Distributions

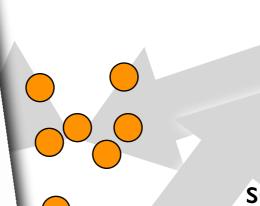
eid 147x unique

username 147x'50bd56d682b4c670'

title 147x unique

utc_ts 2x'315561600', 3x'410245200', 2x'441792000', 2x'1009861200', 2x'1072933200', 4x'1104555600', 3x'1136091600', 3x'1167627600', 2x'1188619200', 2x'1199163600', 2x'-94676400', 120x unique

descrptn 8x", 139x unique



scientific literature

onferences

47 html'.

history of computing as a chorus of voices cultural history museums



These are both dumps from the Virtual Worlds timeline on that date. As I recall the RSS version is very primitive, just

text, the JSON has metadata and links

You can find the cunethistory.org ⊕, th

Field Value Dis

eid 147x unique

username 147x'5

title 147x unique

utc_ts 2x'31556 2x'1009861200' 3x'1136091600' 2x'1199163600'

descrptn 8x",

1x147

60023be4a37f6294

JSON for VW timeline JSON BU 11:9:08.w...

```
"type": "data",
  "data": {
    "sb88e6748dlb366d": {
        "eid": "3b88e6748dlb366d",
        "username": "50bd56d682b4c670",
        "title": "Revolutionary War",
        "utc_ts": "-6144231600",
        "descrptn": "War when colonies fought for indenpendence f:
        "link": "",
        "img_url": "http://dipity.s3.amazonaws.com/uploads/events
        "media_url": "",
        "year": "1775",
        "month": "4",
        "day": "19",
        "hour": "0",
        "minute": "0",
        "second": "0.0000",
```

ific literature

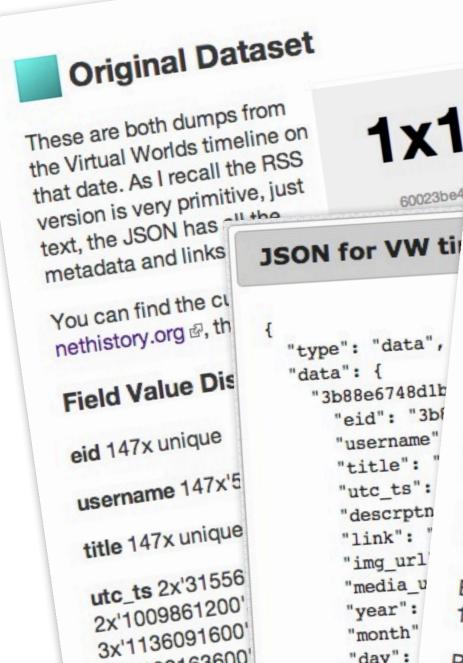
"day":
"hour"

"minut

"secor



ture



2x'1199163600'

descrptn 8x",

Event Catalog

Here we list each imported event and some context extracted from the longer title in the Original Dataset.

Revolutionary War april 19, 1775

Panorama 1787

Invention of the Stereoscope by Sir Charles Wheatstone

The Machine Stops, by E.M Forester November 1909

We, a novel by Yevgeny Zamyatin

Edouard Le Roy coins the term "noosphere"

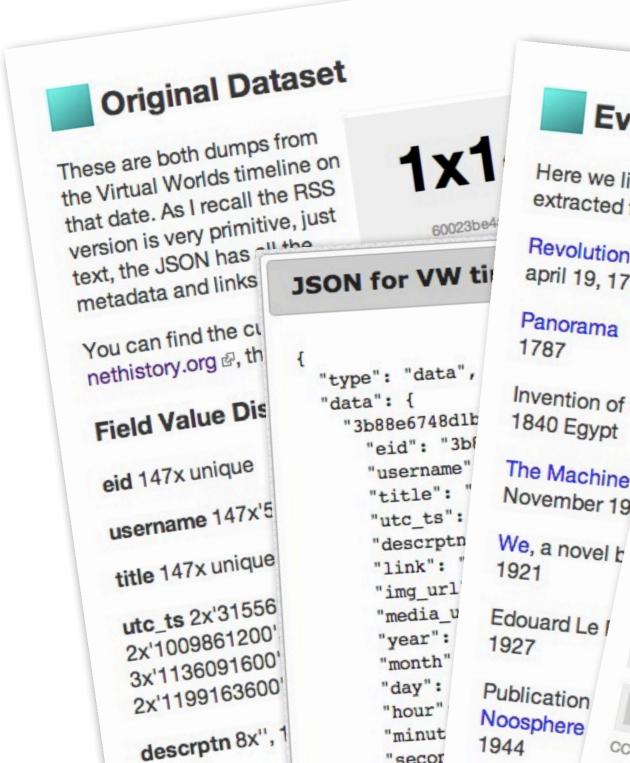
Publication of V.I. Vernadsky's Several Words About the Noosphere

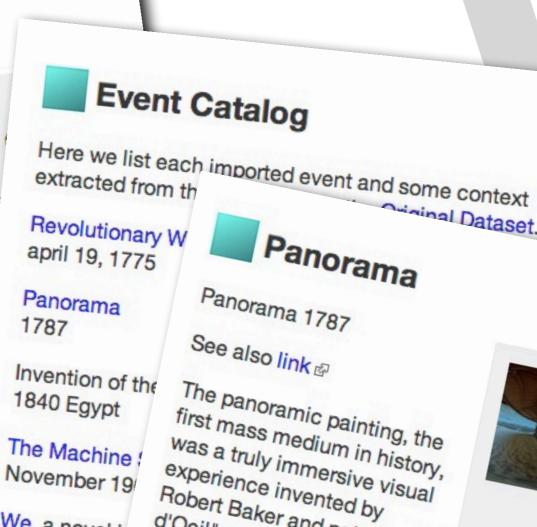
"minut

"secor

1944





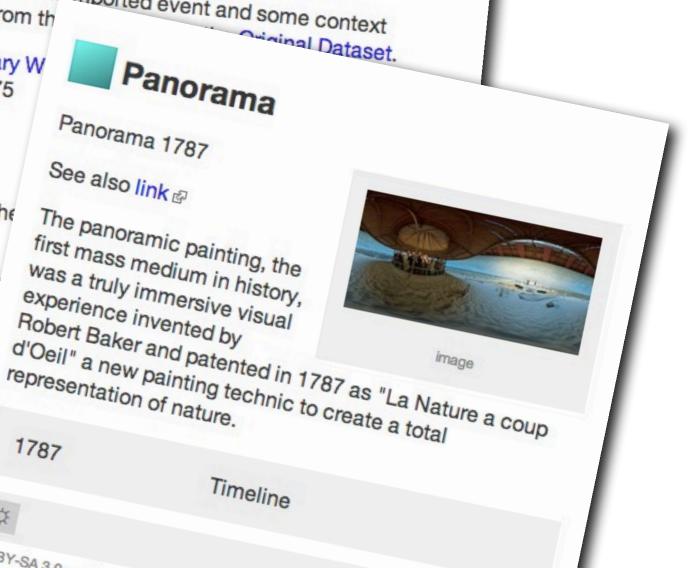


1787

CC BY-SA 30

representation of nature.

Timeline



overlapping communities that comprise a productive ecosystem.

many dimensions deserving of interpretation among people who may not be friends.

how to participate

github screencasts hangouts ward.fed.wiki.org development on GitHub or just watch our work-in-progress videos here.

Find these videos on YouTube also.

Search for <u>federated wiki</u>.

I announce new videos on Twitter. Follow @WardCunningham.

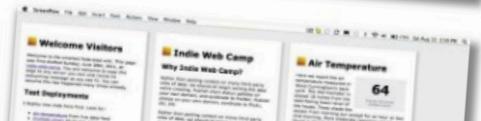
Scroll Down for Newest Videos



We introduce the parts of a Federated Wiki page. The "story" is a collection of paragraphs and paragraph like items. The "journal" collects story edits. Should you take my page and edit it as yours, I can see what you've done and may decide to take your edits as my own.



We show how drag-anddrop between federated wiki pages creates a new model for sharing. A simple JSON model of the page makes this all straightforward.



We explore how a federated wiki's page elements get converted to

development on GitHub or just watch our work-in-progress videos here. an ough rederation, composes Find these videos on YouTube also. Search for federated wiki. I announce new Twitter. Follow lam. 113 commits / 28,219 ++ / 14,855 --Videos We introduce the parts of 01/12 Federated Wiki page. The story" is a collection of aragraphs and paragraph stephenjudkins 34 commits / 4,007 ++ / 2,719 -e items. The "journal" #3 lects story edits. Should take my page and edit 01/13 yours, I can see what 07/12 ve done and may 01/12 07/11 e to take your edits own. moredip 29 commits / 4,065 ++ / 2,181 --07/12 01/12 how drag-and-07/11 01/13 een federated #8 BryanDonovan 19 commits / 759 ++ / 274 -creates a new haring. A simple \$7 of the page 01/13 ard. 07/12 07/11 01/13 #10 07/12 mkelleyharris 9 commits / 1,260 ++ / 601 -paul90 14 commits / 264 ++ / 96 --01/13 Verted to

739 commits / 92,300 ++ / 21,245 --

hallahan 38 commits / 2,691 ++ / 1,232 --

O SvenDowldelt

01/12

32 commits / 2,096 ++ / 464 --

01/12

asolove 24 commits / 709 ++ / 263 --

WardCunningham

07/11

07/11

07/11

07/11

