

6.1040: Software Design

Concept Design Moves

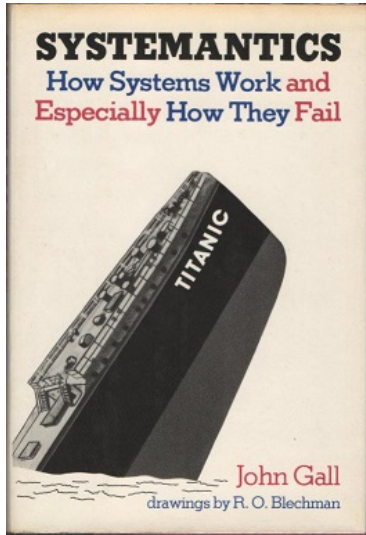
Arvind Satyanarayan & Max Goldman

with material by Daniel Jackson

Fall '24

Simplicity

A complex system that works is invariably found to have evolved from a simple system that worked. A complex system designed from scratch never works and cannot be patched up to make it work. You have to start over with a working simple system.



John Gall, *Systemantics* (1978)

Balancing power and simplicity

Design moves

Good designers apply familiar design moves

Drawing on their experience,
they recognize features of a problem,
and apply well-known techniques

Design patterns

Known structures, solutions

Design moves

Known steps, transformations

Synergy

TRIZ

https://commons.wikimedia.org/wiki/File:40_principles_of_invention_in_TRIZ_method_vector_graphics.png

page A - 40 principles of invention in TRIZ method, sketches rendered into vector graphics

<p>01) DIVISION</p> <p>a) a ship built, made of removable/replaceable bulkheads</p> <p>b) multi-engine aircraft of internal combustion engines</p> <p>d) toys made from Lego blocks</p> <p>e) breakable chocolate</p> <p>f) multi-grip gators</p> <p>g) a banded file of paper sheets</p> <p>h) multi-blade cartridge razors</p> <p>i) multi-blade aircrews of aircrafts, or wind power-plants</p>	<p>08) ANTI-WEIGHT (balance preserving)</p> <p>a) winds of different speeds</p> <p>b) anti-aircraft</p> <p>c) fish bladder (fish submerged in water)</p> <p>d) balloon filled with hot air</p> <p>e) slipping hydrofoils boats</p> <p>f) concept of hovercrafts</p> <p>g) m/s</p> <p>h) 2m/s</p> <p>i) 2M/s</p>	<p>15) DYNAMICS</p> <p>a) automatically extended/reopened doors, air-locks, etc.</p> <p>b) automatic gears in mobiles</p> <p>c) undercarriages in cars of variable stiffness characteristic</p> <p>d) electronic controllers for carburettor</p> <p>e) electronically controlled fuel injection in dependency of driving conditions during the driving</p>
<p>02) TAKING OUT</p> <p>a) taking of notoriously noisy power unit, or compressor out of the main boat</p> <p>b) (engines, turbines, blades) combined with internal ducts for air ventilation system, taken out of the building, i.e. placed on the buildings elevations</p> <p>c. placed on the buildings elevations</p> <p>d) sound of bird's croaker, previously registered on a tape, and played back, can be used scaring away the birds, notoriously flying near or around the airports</p>	<p>09) PRE-ELIMINARY ANTI-ACTION (COUNTER-ACTION)</p> <p>a) surrounding sounds</p> <p>b) surrounding sounds</p> <p>c) counter-acting active</p> <p>d) piezoelectric anti-impact system for cutting tool</p>	<p>16) EXCESSIVE (OR PARTIAL) ACTION</p> <p>a) in close fit of both piston and cylinder of the engine</p> <p>b) to spray excessively paint, and then to remove the excess, destined for tapping</p> <p>c) to fulfill the fuel tank, and then to remove the excess of fuel</p>
<p>03) LOCAL QUALITY</p> <p>a) dustless excavation of coal (the dust is captured by a knife by tiny droplets inside of this water cone)</p> <p>b) bigger droplets outside of the cone</p> <p>c) keep the dust in a place</p> <p>d) weighed average from marks</p> <p>e) weighed estimation procedure for savings of computers, printers, etc.</p>	<p>10) PRE-ELIMINARY ACTION</p> <p>a) parking of hand discs (when it is needed)</p> <p>b) blowing off the (potentially choked) nozzles in printing cartridges (operational mode)</p> <p>c) OFF (parking mode)</p> <p>d) ON (operational mode)</p>	<p>17) ANOTHER DIMENSION</p> <p>a) to stack vertically containers, chains, laptops, etc. (in studying) - 2D</p> <p>b) to stack vertically structures of atoms (in studying) - 3D</p> <p>c) to stack vertically structures of atoms (in studying) - 3D</p> <p>d) to stack vertically structures of atoms (in studying) - 3D</p> <p>e) to stack vertically structures of atoms (in studying) - 3D</p>
<p>04) ASYMMETRY</p> <p>a) pneumatic tyre asymmetrically reinforced from outside, due to contact with pavement curb</p> <p>b) left- or right-handed sets of priority</p> <p>c) asymmetrically reinforced concrete mixer, blender</p> <p>d) asymmetrically reinforced conjunctions, handles</p> <p>e) asymmetrically defined functionality of the "trap-door" mechanisms</p> <p>f) left- or right-handed sets of priority</p> <p>g) asymmetrically built car, due to either left- or right-sided driver's sit</p>	<p>11) BEFOREHAND CUSHIONING</p> <p>a) for instance, a method of "dressing" of the cut tree branches (this action, actually forces a tree to beforehand reactions, leading to gathering of insouciant "prestress band")</p> <p>b) driver's sit/ing</p> <p>c) masking of the chosen elements, within patches on the object, before its painting</p>	<p>18) MECHANICAL SELF-INDUCED VIBRATIONS (IN RESONANCE)</p> <p>a) piezoelectric engine - 1,500 conceptual design</p> <p>b) electric circuit of inducements</p> <p>c) lighteners for set of two discs</p> <p>d) quartz generators, in electric circuits</p>
<p>05) MERGING</p> <p>a) several computers combined into functioning network</p> <p>b) a hedge made of pines</p> <p>c) ledies made of wood/polyesterification fibres</p> <p>d) roofing mats combined into coverage of house roof</p> <p>e) mobile concrete mixer, mobile car, refrigerator, merged into single mobile machine unit, combining of the stationary machines with mobile undercarriages</p>	<p>12) EQUIPOTENTIALITY</p> <p>a) a sequence of linear movements is replaced by single seamless movement (decision of art: a heavy element of the press, lifted up, and carried away usually in sequence of linear movements is replaced with less deflected or removable faster long arm)</p> <p>b) dissolvable surgeon threads</p> <p>c) rather one tool clean thicker object; than to heat up another bigger outer object, which seizes the former one</p>	<p>19) PERIODICAL ACTION, OR PULSED ACTION</p> <p>a) hammer drill</p> <p>b) pulsed laser against layers of continuous operational mode</p> <p>c) "pulsed" laser against layers of continuous operational mode (Pulse Width Modulation)</p> <p>d) pulse laser against thicker object; than to heat up against conventional DC power unit f) step motors</p>
<p>06) UNIVERSALITY</p> <p>a) a helmet in use, within field conditions, rendered as a) spade</p> <p>b) universal within field conditions, rendered as a) Swiss Army knife</p> <p>c) sets of universal kitchen robots, mixers, blenders, with operating actuators (rasps, juice extractors, etc.)</p> <p>d) frying pan</p> <p>e) Swiss Army knife</p>	<p>13) INVERSION (UPSIDE DOWN)</p> <p>a) for instance, in reversing the working mode of vacuum cleaner (then, vapour could be used in cleaning of carpets)</p> <p>b) to turn mounted object upside down, on assembling line</p> <p>c) turning (object in move, while motionless turning tool, against milling (mobile milling cutter)</p> <p>d) binary life's structure is sought from root to leaves in one (in-depth) search algorithm; while another algorithm seeks through roots leaves from root to root</p>	<p>20) CONTINUITY ACTION OF USEFUL ACTION</p> <p>a) enlarging drill, in both directions</p> <p>b) printing also in returning direction (idle mode)</p> <p>c) steam turbines of generators for one power plants, working as power-plant (in optimal mode), while the others working as pump-storage power plants, in aim of storing of energy for afternoon hours</p> <p>d) pulse laser against thicker object; than to heat up against conventional DC power unit f) step motors</p>
<p>07) EMBEDDED STRUCTURES (nested "Dolls" - Matryoshka)</p> <p>a) radiators of ultrasound welders</p> <p>b) radiators of ultrasound welders</p>	<p>14) SPHEROIDALITY, CURVATURES</p> <p>a) applications of bearings rollers, spirals, shafts, spheres, dome-domes</p> <p>b) replacement of circular movements by circular movements</p> <p>c) application of arcs in architecture (dome-domes in vaults of buildings)</p> <p>d) circular actuators (synchronizers / master-slaves in blocks of control) linear actuators of particles</p> <p>e) extensible, retractable measuring tape</p>	<p>21) SKIPPING, QUICK MODE, OR PACE OF REALIZATION</p> <p>a) wood-bone materials</p> <p>b) advanced processing</p> <p>c) wood-bone materials</p> <p>d) wood-bone materials</p> <p>e) wood-bone materials</p>




page B - 40 principles of invention in TRIZ method, sketches rendered into vector graphics

<p>22) "BLESSING IN DISGUISE" (CONVERT HARM INTO BENEFIT)</p> <p>a) burning of a building inside the blast fire in outskirts fire of the burrows</p> <p>b) main fire</p> <p>c) burning materials are to be "treated" with liquid nitrogen</p> <p>d) nitrogen (N₂) rapidly liquefies</p>	<p>28B) SUBSTITUTING OF MECH. SYS. WITH ELECTRO-MAGN. SYSTEMS</p> <p>A) magnetic bore pressure of the machined materials</p> <p>B) subject's pressure</p> <p>C) mobile fields instead of static fields</p> <p>D) heterogeneous materials</p>	<p>34) DISCARDING & RECOVERING, (REJECT & PARTS REGENERATION)</p> <p>a) dissolvable medication capsules</p> <p>b) nuclear's packages</p> <p>c) medicinal capsules</p> <p>d) nuclear's packages</p> <p>e) medicinal capsules</p> <p>f) nuclear's packages</p>
<p>23) FEEDBACK PRINCIPLE</p> <p>a) basically, as well as particularly, in receiver</p> <p>b) "closed loop with negative feedback" (temperature)</p> <p>c) input signal</p> <p>d) object</p> <p>e) output signal (inverted)</p> <p>f) temperature regulation</p> <p>g) closed loop with negative feedback</p> <p>h) (temperature)</p>	<p>29A) PNEUMATICS & HYDRAULICS</p> <p>a) pneumatic automobile tyre, pneumatic (air-tight) dampers, automotive airbags</p> <p>b) pneumatic "discrete" driving of operational actuators, for instance, in automatic welding of packaging covers made of plastic wrapping</p> <p>c) pneumatic</p> <p>d) hydraulic</p>	<p>35) CHANGING STATE, PARAMETERS, PROPERTIES OF MATERIALS</p> <p>1) high temperature processing</p> <p>2) low temperature processing</p> <p>3) process ready for further proceeding step (for submerging in liquid chocolate)</p> <p>a) process ready for further proceeding step (for submerging in liquid chocolate)</p> <p>b) process ready for further proceeding step (for submerging in liquid chocolate)</p>
<p>24) INTERMEDIATE MEANS, "FITTING" PRINCIPLE</p> <p>a) electric circuit fitting either: - impedance, or resistance, or capacitance, or inductance</p> <p>b) fitting in mean of: - pressure-flowing (fluid mechanics), - loading of force moment, in transition gears (mechanical fitting) - stress of two interfacing surfaces (endurance)</p> <p>c) fitting in mean of: - pressure-flowing (fluid mechanics), - loading of force moment, in transition gears (mechanical fitting) - stress of two interfacing surfaces (endurance)</p>	<p>29B) PNEUMATICS & HYDRAULICS</p> <p>a) automobile brakes, in driving of plane elevator, as well as enormous force transition</p> <p>b) F₂ > F₁</p> <p>c) F₂ > F₁</p> <p>d) F₂ > F₁</p> <p>e) F₂ > F₁</p>	<p>36) PHASE TRANSITION</p> <p>a) binary, phase transition cycle for refrigerator structure (from solid to liquid, and back to solid)</p> <p>b) binary, phase transition cycle for refrigerator structure (from solid to liquid, and back to solid)</p>
<p>25) SELF-SERVICING PRINCIPLE</p> <p>a) self-servicing lines</p> <p>b) self-servicing lines</p> <p>c) self-servicing lines</p> <p>d) self-servicing lines</p>	<p>30) FLEXIBLE FILMS, FOLDS, MEMBRANES</p> <p>a) inflatable balloons, domes, barriers</p> <p>b) wrap-around packaging based on plastic, air-wrapped packaging</p> <p>c) wrap-around packaging based on plastic, air-wrapped packaging</p>	<p>37) THERMAL EXPANSION</p> <p>1) thermal shaft fitting</p> <p>2) state of thermal balance</p> <p>a) thermal shaft fitting</p> <p>b) state of thermal balance</p>
<p>26) COPYING, IMAGING PRINCIPLE (application of optical mapping)</p> <p>a) use of ultrasound mapping</p> <p>b) magnetic resonance mapping</p> <p>c) X-rays radiography</p> <p>d) in mapping of material structures the application of: - ultraviolet, - infrared, - ultraviolet optical methods</p> <p>e) use of fluorescence and of scintillation's materials</p>	<p>31) POROUS MATERIALS</p> <p>a) aerated concrete (porous concrete)</p> <p>b) porous, sponge materials in kitchen getters</p> <p>c) porous, sponge materials in kitchen getters</p> <p>d) porous, sponge materials in kitchen getters</p>	<p>38) STRONG OXIDANTS</p> <p>a) oxygen</p> <p>b) ozone</p> <p>c) indirectly vapour H₂O</p> <p>d) indirectly vapour H₂O</p>
<p>27) INEXPENSIVE SHORT-LIVED OBJECTS (CHEAP CADUCITY, & OF DISPOSABLE MATERIALS)</p> <p>a) kitchen utensils, dishes</p> <p>b) disposable syringes</p> <p>c) disposable syringes</p> <p>d) disposable syringes</p>	<p>32) COLOUR CHANGING (ALTERNATING)</p> <p>a) in lapping process for inner surfaces of engine pistons & cylinders, the probing of phosphorescence distribution can be used</p> <p>b) in lapping process for inner surfaces of engine pistons & cylinders, the probing of phosphorescence distribution can be used</p>	<p>39) NEUTRAL ATMOSPHERES, INERT ENVIRONMENTS</p> <p>a) Co extinguishers</p> <p>b) N₂ or He protection atmospheres in processing, and production</p> <p>c) N₂ or He protection atmospheres, and materials, both raw and processed</p>
<p>28A) PRINCIPLE OF SUBSTITUTING OF MECHANICAL SYSTEM WITH FUNCTIONALLY EQUIVALENT ELECTRO-MAGNETIC SYSTEMS</p> <p>a) electrical field</p> <p>b) mechanical pressure</p> <p>c) magnetic field</p> <p>d) fastening</p>	<p>33) HOMOGENEITY</p> <p>a) the two interfacing surfaces should be made of the same material</p> <p>b) the two interfacing surfaces should be made of the same material</p> <p>c) the two interfacing surfaces should be made of the same material</p>	<p>40) COMPOSITE MATERIALS</p> <p>1) elements of blades, rotors, aircrews in wind turbines constructions;</p> <p>2) yachts & catamaran's constructions;</p> <p>3) elements exposed to fibre-stretching, severe stress</p> <p>a) elements of blades, rotors, aircrews in wind turbines constructions;</p> <p>b) elements exposed to fibre-stretching, severe stress</p>



Code refactoring

Refactor...

Extract

-  Extract to inner function in method 'isLoggedIn'
-  Extract to method in class 'SessioningConcept'
-  Extract to function in module scope

Move

-  Move to file
-  Move to a new file

Surround With

- [...] Async Function Statement
- [...] Set Timeout Function
- [...] Async Function Expression
- [...] Do-While Statement
- [...] More...

[Learn more about JS/TS refactorings](#) [Show Disabled](#)

Concept design moves

Tighten / loosen

Trading off automation and flexibility

Unify / specialize

Trading off generality and specificity

Tighten / loosen



door lock / light pull



tighten



airplane toilet lock



dimmers with separate controls

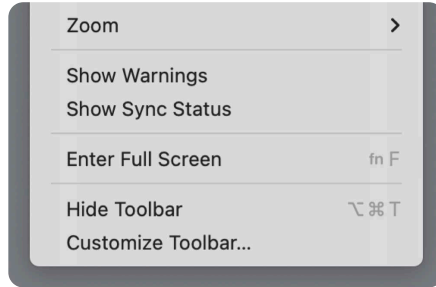
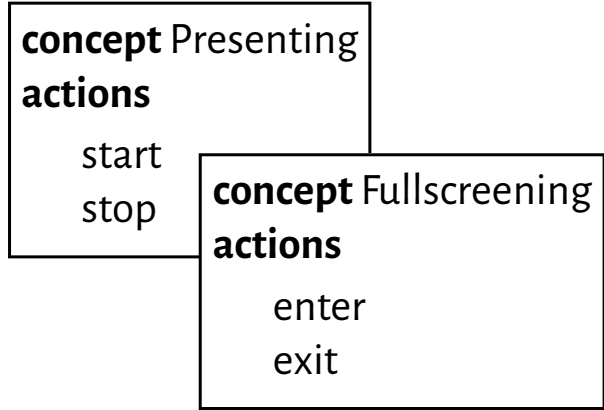


loosen



rotary dimmer switch

Keynote fullscreen



edit slides in a window,
present in fullscreen

fullscreen without slideshow
(~2010)

slideshow without fullscreen
(2021)

fully synchronized

one-way synchronization

no synchronization

loosen

loosen

Destination dispatch elevator



A boost to traffic performance

Schindler PORT groups passengers by destination to provide the shortest possible trip for every rider, avoiding chaotic elevator runs and random, multiple stops.

User-friendly operation

With Schindler PORT's universal card reader, a rider simply swipes a personal access card at the Schindler PORT terminal for an elevator car to be immediately assigned with an approved destination.

Excellent personalized service

Schindler PORT can customize your journey, whether it be a special VIP trip, a streamlining patient transport or allowing for more approach time, longer door opening time or additional space for passengers with special needs.

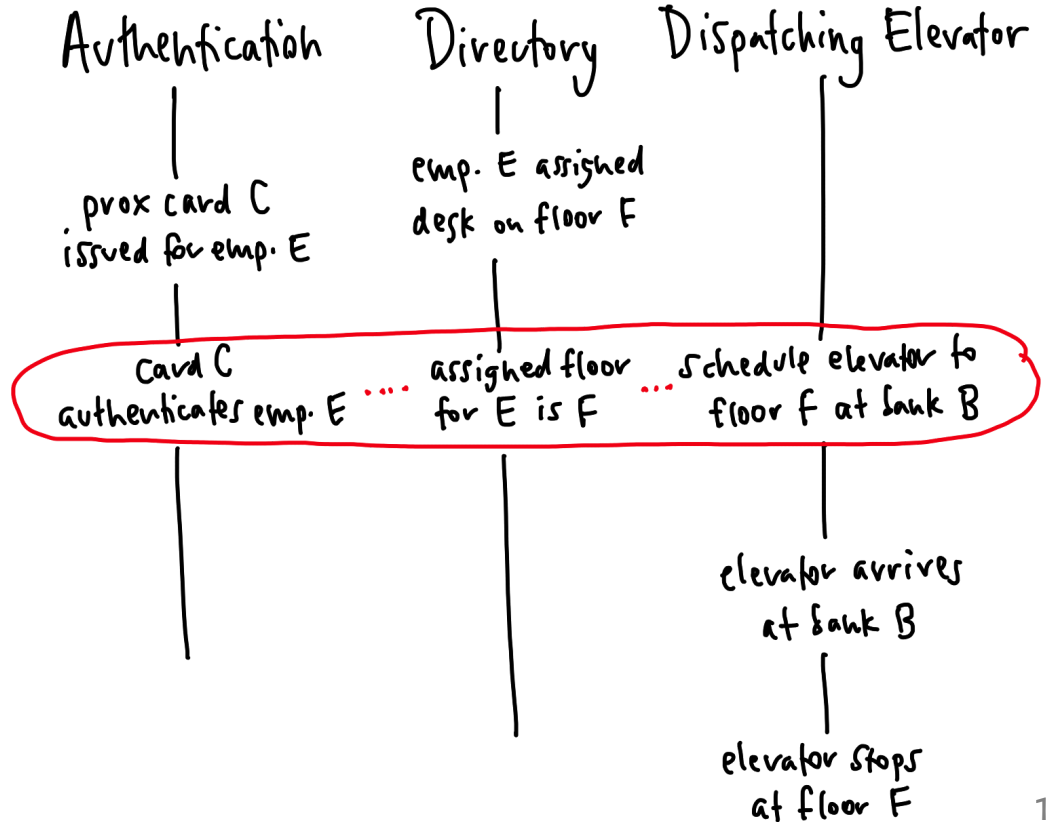
Enhanced building security

Floor access is defined by the building management through access cards or smartphones. Schindler PORT can also be integrated with turnstiles to further enhance building security.

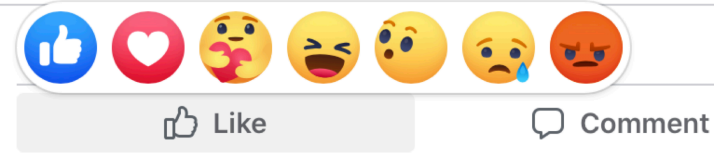
Destination dispatch elevator

tighten

increased automation
better security
reduced flexibility



Facebook reactions



concept Upvoting [Item]
purpose rank items by popularity
actions

upvote (u: User, i: Item)

...

... sync ...

concept Reacting [Item]
purpose convey emotion to author
actions

angry (u: User, i: Item)

...

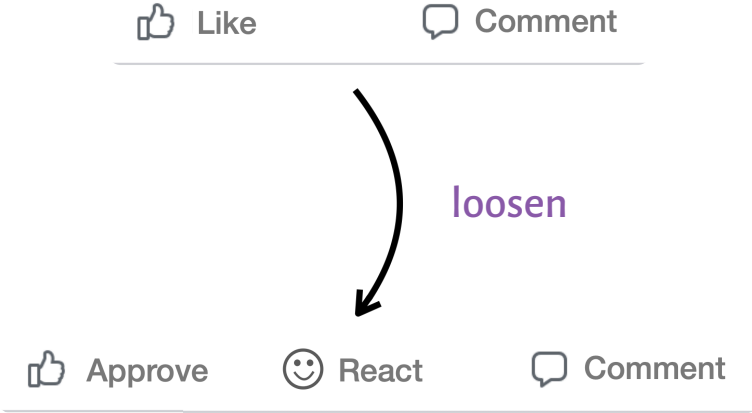
tighten

simplicity

... ?

Facebook reactions

An alternative design...



recovers flexibility
requires multiple steps

Gmail labels and trash

The screenshot displays the Gmail interface. On the left is a navigation sidebar with options: Compose, **Inbox**, Starred, Snoozed, Sent, Drafts, Trash, Categories, hacking, and meetups. The main area shows the 'Primary' tab selected, with a search bar at the top and a list of emails. The top email is from 'Alyssa, me 3' with labels 'hacking', 'meetups', and 'javascript - JavaScript makes me feel nostalgic for S'. Below the email list, storage usage is shown as '0 GB (0%) of 15 GB used' and links for 'Terms · Privacy · Program Policies' are present. A search bar at the bottom contains the query 'label:todo label:trash'. Below the search bar, a preview of a search result is shown: an email from 'me, Alyssa' in the 'Trash' folder with labels 'hacking', 'meetups', 'todo', and 'javascript -', dated '10:11 am'.

Gmail labels and trash

app Gmail

sync delete (m: Message)
Trashing.delete(m)
Labeling.affix(m, "Trash")

tighten

automation
synergy!

concept Trashing [Item]

purpose undo deletion

actions

delete (i: Item)

restore (i: Item)

empty ()

..... sync

concept Labeling [Item]

purpose organize with overlapping

actions

affix (i: Item, l: Label)

remove (i: Item, l: Label)

find (labels: **set** Label,
out items: **set** Item)

Synergy

The overall value of the composition is more than the sum of the values of the concepts

E.g.

One concept amplifies another

One concept allows us to simplify another another concept, or adapt it in a new way

Gmail labels and trash

app Gmail

sync delete (m: Message)
Trashing.delete(m)
Labeling.affix(m, "Trash")

tighten

automation

synergy!

↳ filter on trashed messages using labels

concept Trashing [Item]

purpose undo deletion

actions

delete (i: Item)

restore (i: Item)

empty ()

.....sync.....

concept Labeling [Item]

purpose organize with overlapping

actions

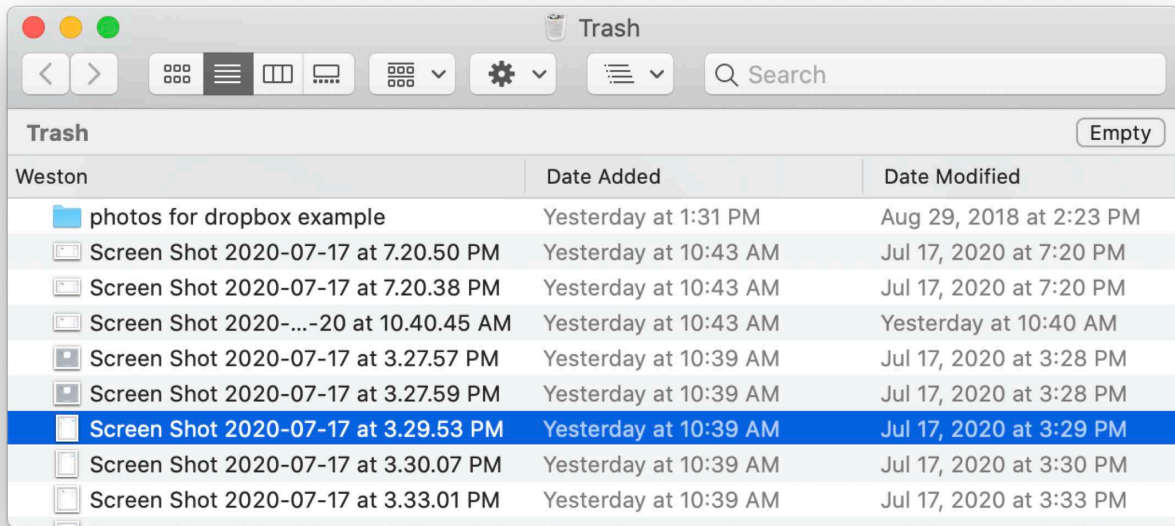
affix (i: Item, l: Label)

remove (i: Item, l: Label)

find (labels: **set** Label,

out items: **set** Item)

macOS folders and trash



concept Trashing

concept Folders

tighten

synergy!



can use all folder
features on the trash

challenges that arise
from this design?

Yellkey shorten and expire

yellkey: url to common word shortener.

The screenshot shows the yellkey website interface. At the top, it says "yellkey" in a large font. Below that, it says "enter url and length of time for key to exist." There are two input fields: one for the "full url (e.g. http://www.google.com)" and another for the duration, which is currently set to "5 minutes". A blue button labeled "generate yellkey" is below the inputs. Below the button, it says "your key is: **hack**." and "go to www.yellkey.com/hack to use."

concept Shortening
state

const shorthands: **set** String
...

concept Expiring

tighten

synergy!



shorthands can be a
small set of short words

Calendar events and invitations



Arvind Satyanarayan

November 15, 2018 at 2:04 PM

Re: TALK: Monday 11-19-2018 Kanit (Ham) Wongsuphasawat: No...

[Details](#)

Cc: seminars@csail.mit.edu, HCI-Seminar@lists.csail.mit.edu



This message is from a mailing list.

[Unsubscribe](#) 

Despite some erroneous messages sent to this list accidentally, Kanit's talk is happening!
Please join us on Monday.

Calendar events and invitations

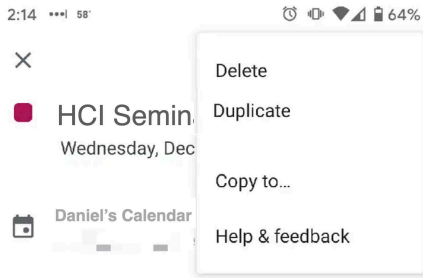
Seminar announced as email to mailing list
with attached calendar event



Event automatically added to user's **Google Calendar**



User deletes event
from their calendar



Cancellation email automatically sent to
other invitees!

Canceling and deleting events in the Google Calendar mobile app is similar to
on a desktop.

1. First, open Google Calendar.
2. Tap on the event you wish to cancel.
3. Press on the three dots in the top right corner of the event window.
4. Select Delete.
5. Tap Delete event. Google Calendar will send a cancellation email to the guests.

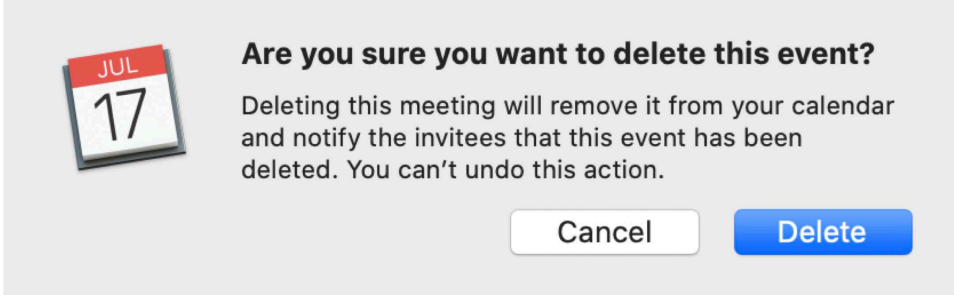
Mar 22, 2021

<https://wpamelia.com> › Blog

[How to Cancel an Event in Google Calendar - Amelia booking ...](#)

Calendar events and invitations

Apple Calendar



tighten

automation, but
a disastrous loss of flexibility

concept Calendaring
purpose record engagements
actions
create(... **out** e: Event)
delete(e: Event)
...

... sync ...

concept Inviting
purpose coordinate events
actions
accept(e: Event)
decline(e: Event)
...

Calendar events and invitations

Apple Calendar



Are you sure you want to delete this event?

Deleting this meeting will remove it from your calendar and notify the invitees that this event has been deleted. You can't undo this action.

Cancel

Delete

Revised design:
make the sync optional

loosen

adds complexity, but
restores flexibility



Are you sure you want to delete this event?

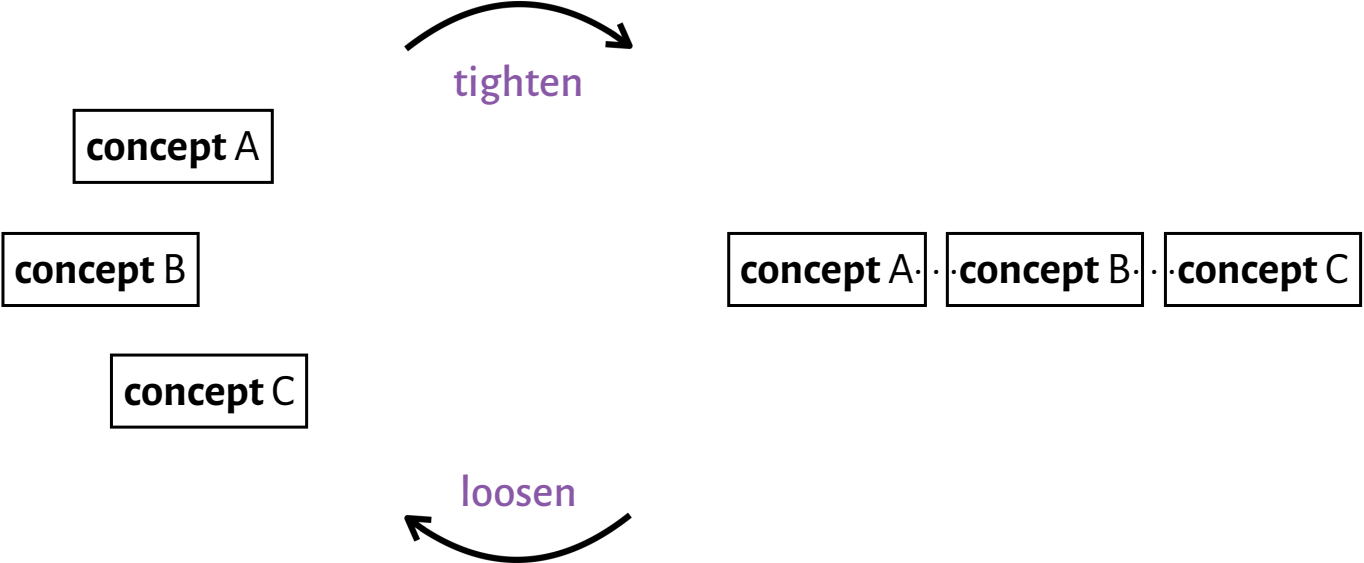
Deleting this event will notify the organizer that you're declining the event and deleting it from your calendar. You can't undo this action.

Cancel

Delete and Don't Notify

Delete and Notify

Tighten / loosen



prioritizing automation or flexibility?

Unify / specialize



set of wrenches



unify



adjustable wrench



macro lens

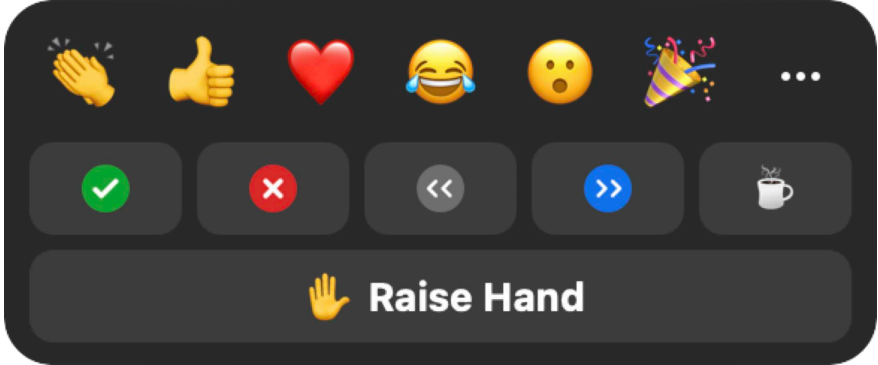


specialize



general-purpose lens

Zoom reactions



Zoom reactions

specialize

improve both flexibility
and familiarity



concept Reacting

concept Chatting

concept Polling

concept Feedback

concept Participating

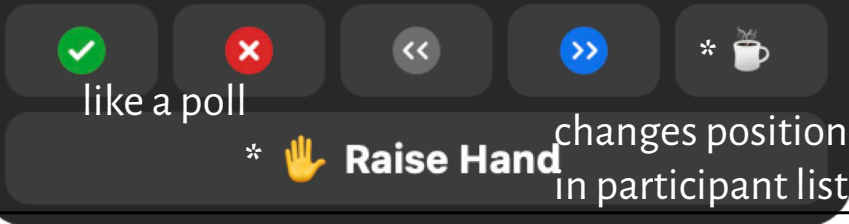
all summarized with counts

disappear automatically



mutually exclusive
same emoji as chat

remain until dismissed



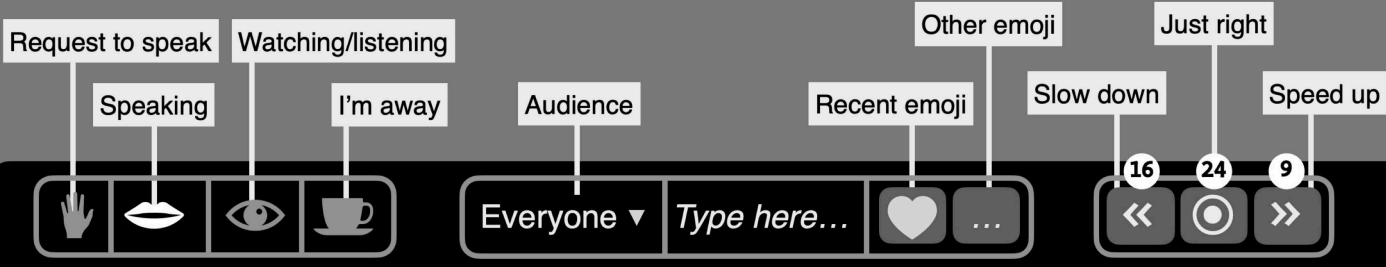
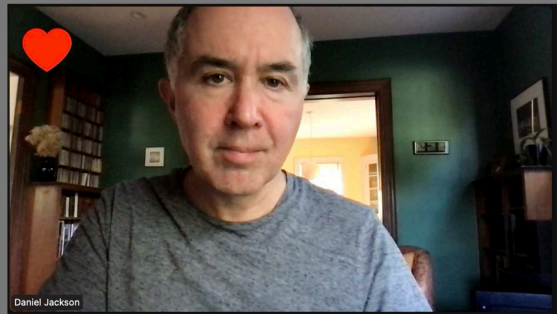
like a poll

changes position
in participant list

mutually exclusive

* about conversation protocol

Zoom reactions > An alternative design...



Moira lists

WebMoira List Manager : Daniel Jackson [Help](#) | [My Lists](#) | [Undo Log \(1\)](#)

List Name: dnj-play1
Description: none
Attributes: active, moira mailing list
Permissions: private, visible
Last Modified: by dnj with moiraws on 22-mar-2022 09:39:00

[Edit](#)

Members **concept Mailing Lists**

Add Member: [Add](#)

Leave List: [Remove Me](#)

MIT Users

Daniel Jackson (dnj)	remove
----------------------	------------------------

Email Addresses

daniel@dnj.photo	remove
------------------	------------------------

Administrators **concept Access Control Lists**

Owner: [dnj-play2 \(List\)](#)

Change Owner: [Change](#)

Add Administrator: [Add](#)

Leave Owner List: [Remove Me](#)

MIT Users

Daniel Jackson (dnj)	remove
----------------------	------------------------

```
graph TD; A[concept Lists] --> B[concept Mailing Lists]; A --> C[concept Access Control Lists];
```

unify

simplifies user experience and code
introduces some pitfalls

Gmail labels and categories

concept Labeling [Item]

purpose organize with overlapping

principle

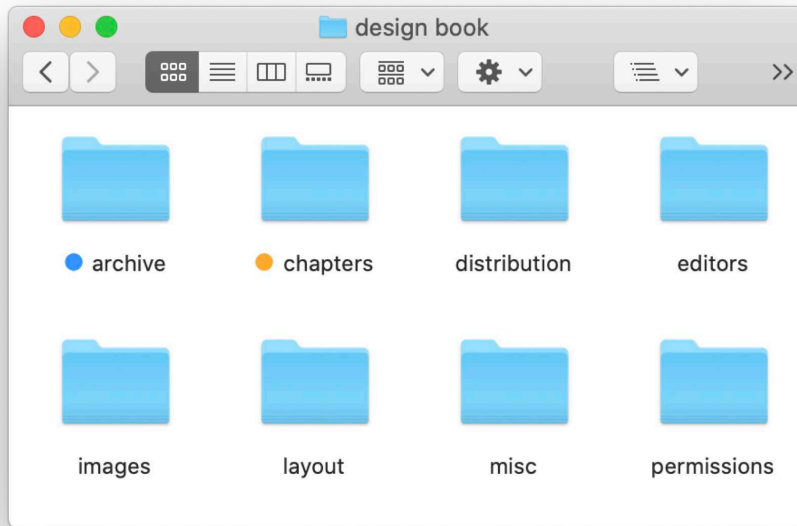
if label is added to item and not removed,
then filtering on label will display item

actions

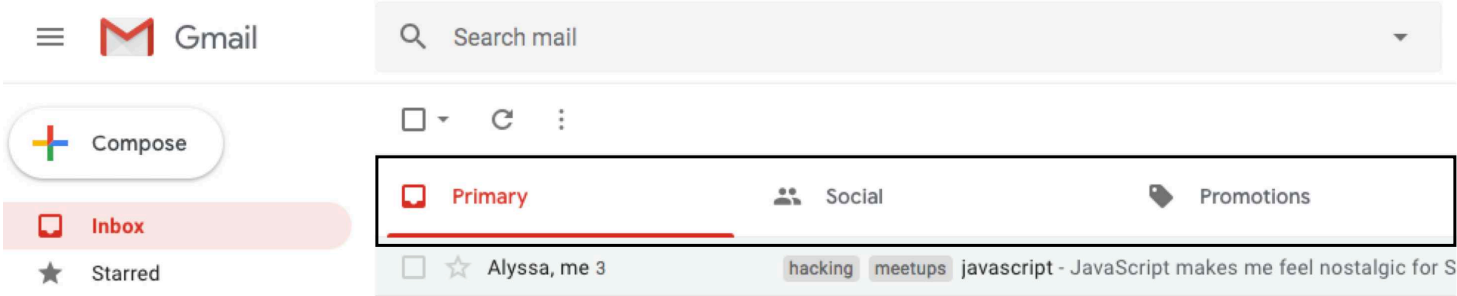
affix (i: Item, l: Label)

remove (i: Item, l: Label)


find (labels: **set** Label, **out** items: **set** Item)




Gmail labels and categories



categories 

 trash is a label

 labels for the conversation

 show messages with a label

Gmail labels and categories

settings for categories

Settings

General Labels **Inbox** Accounts and Import Filters and Blocked Addresses Forwarding and POP/IMAP Add-ons Chat and Meet Advanced

Offline Themes

Inbox type: Default

Categories:
[Learn more](#)

- Primary
- Promotions
- Social
- Updates
- Forums

Starred messages


- Include starred in Primary

Bundling in Promotions

- Enable bundling of top promo emails in Promotions

Choose which message categories to show as inbox tabs. Other messages will appear in the Primary tab.

Deselect all categories to go back to your old inbox.



Gmail labels and categories

Settings

General Labels Inbox Accounts and Import Filters and Blocked Addresses Forwarding and POP/IMAP Add-ons Chat and Meet Advanced

Offline Themes

System labels	Show in label list
Inbox	
Starred	show hide
Snoozed	show hide
Important	show hide
Sent	show hide
Scheduled	show hide show if unread
Drafts	show hide show if unread
All Mail	show hide
Spam	show hide show if unread
Trash	show hide

Categories	Show in label list	Show in message list
Categories	show hide	
Social	show hide	show hide
Updates	show hide	show hide
Forums	show hide	show hide

settings for labels ...
including categories?

Gmail labels and categories

Google gets it terribly, terribly wrong with Gmail tabs and makes me angry



By [Mark Wilson](#)

Published 2 years ago



[Home](#) › [Quick Tech Tip: Disabling Gmail's Category Tabs](#)

Quick Tech Tip: Disabling Gmail's Category Tabs

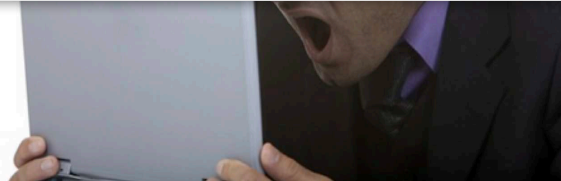
Mon, 07/29/2013 - 12:17 | [Chuck Gray](#)

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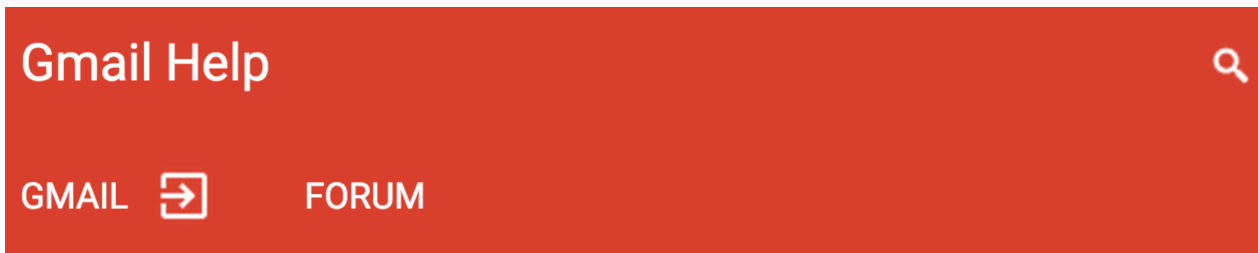


Are you a Gmail user? Did you wake up a week or two ago to find that your new messages were now being automatically organized by Gmail into tabs of different, pre-determined categories? And, did you think, like me, that they were **really ugly, stupid, and unnecessary?** Here's a quick tip on how to rid yourself of them!

and checking the settings menus, I could see that tabs were now available to me. Excitement was short-lived, however; it quickly became apparent that this new feature is a disaster.



Gmail labels and categories



Using labels

Labels help you organize your messages into categories – work, family, to do, read later, jokes, recipes, any category you want. Labels do all the work that folders do, but with an added bonus: you can add more than one to a message.

Gmail labels and categories

concept Labeling

concept Categorizing

purpose

organize messages

organize messages

principle

user (or system) adds label to message; filter on label shows message

system (or user) adds category to message; filter on category shows message

tabs in UI?

no

yes

user can create?

yes

no

outside inbox?

yes

no

automation?

Rules *-or-* Smart Labels

fixed

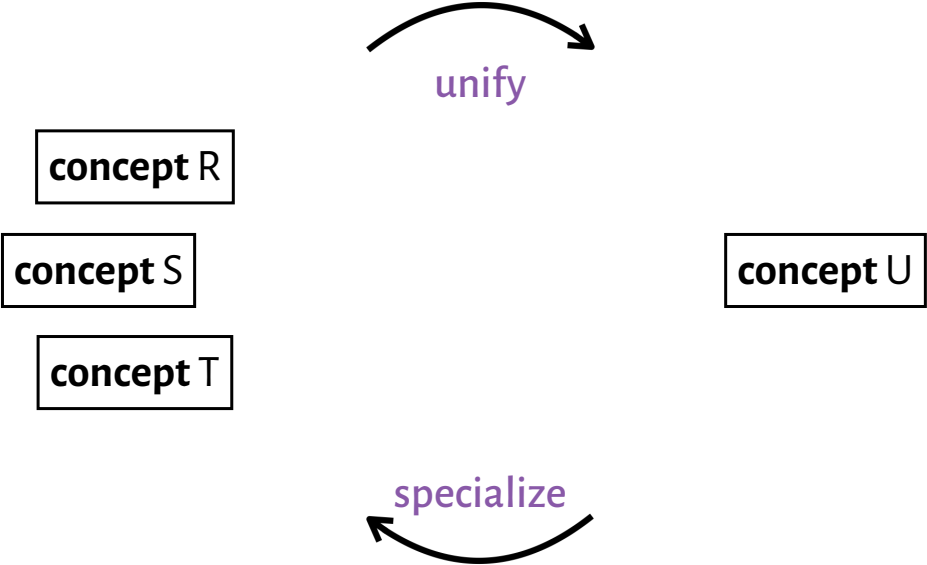
specialize

no benefit?

limits options

and complicates implementation?

Unify / specialize



prioritizing generality or specificity?

Today

🌀 **Design moves** for concepts

Unify / specialize

- 🗨️ unify Zoom
- 👍 unify Moira
- 🗨️ specialize Gmail

Tighten / loosen

- 👍 loosen Keynote
- 😞 tighten Facebook
- 👍 tighten Gmail
- 👍 tighten macOS
- 👍 tighten Yellkey
- 🗨️ tighten Calendars

⚡ **Synergy** when new value is unlocked by the composition

Looking ahead

Designing data and services