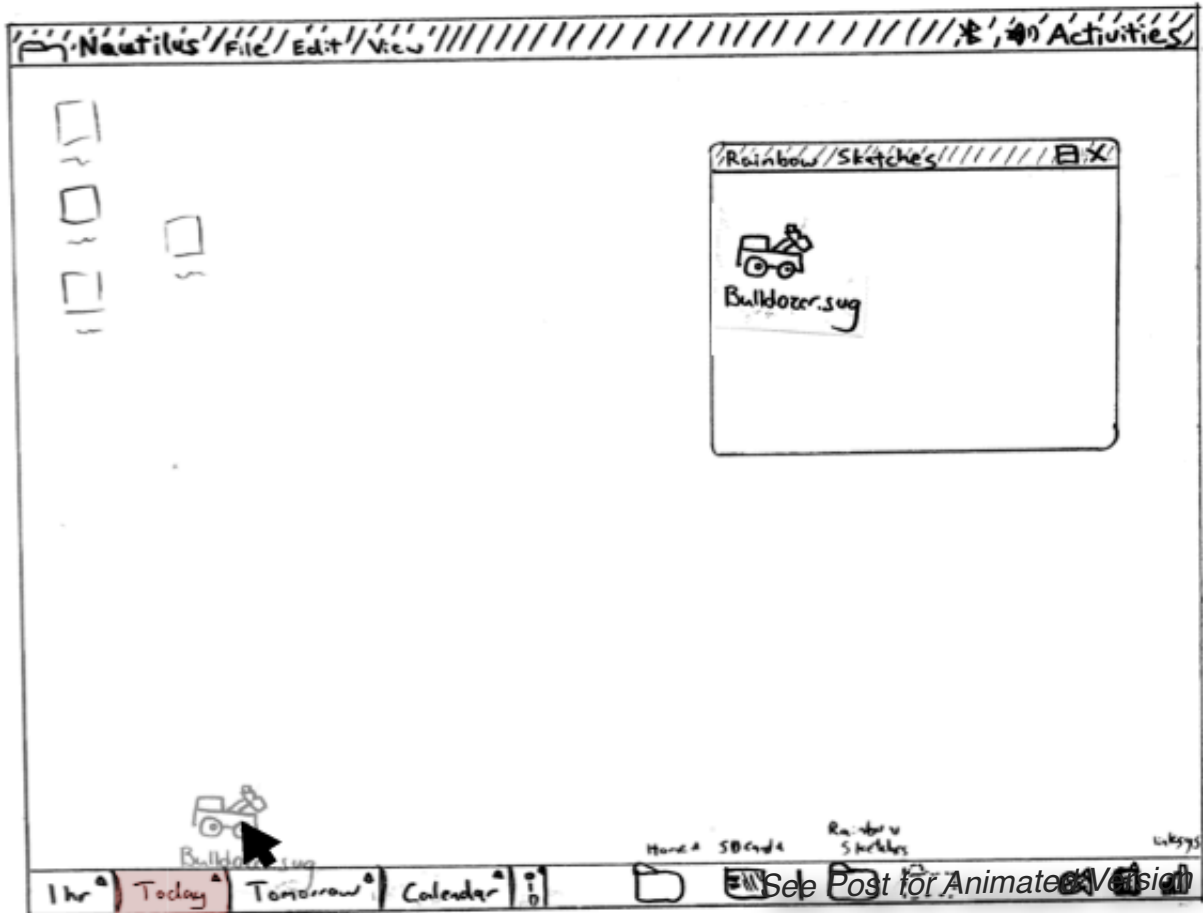


# Stay on target.

THE INCOMPLETE AND UNEDITED EDITION

GNOMEUXHACKFEST2010

a **gnome3** for a busy world.

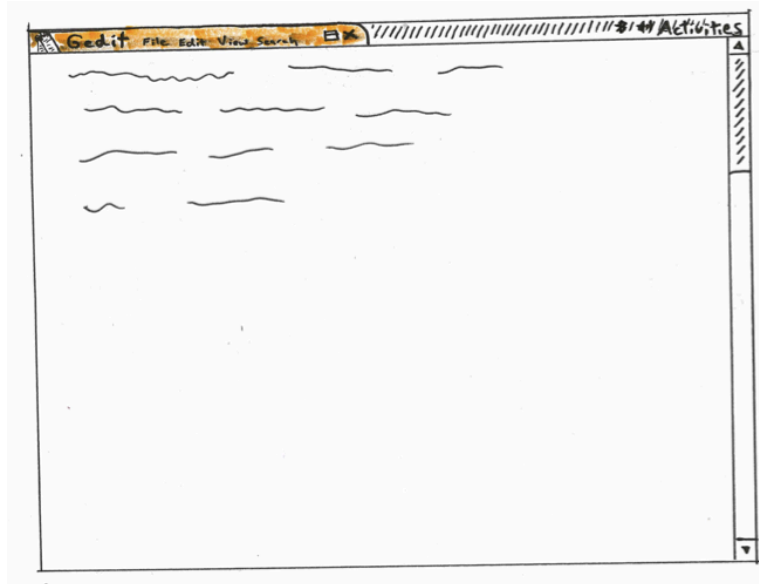


→ I DEMAND MOOOOOOOORE MOCKUPS

Folks need help managing attention.

programmers have known this shit for years. it's all in The Way of the Terminal:  
static, yet agile. encourage deep focus on THE THING, yet bring multiple tools to  
bear on a task. our solution is different, but we ( finally ) share the goal.

**Preserve Focus:** apps open full-screen by default. well, maximized technically, but a visual presentation that leaves little trace but of the work at hand. a few controls ( white-list ) and a word are all that remain of the OS. they're hushed & in the corner.

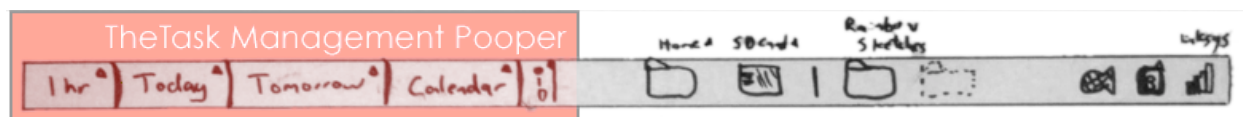


→ THE GNOME SHELL

**Keep Multiple Tools *In-Hand*:** focus needn't come at the expense of restrictions on intermixing tools, as long as the toolbox itself can be kept *in-hand*: ready to subconsciously draw upon, as a coke can unto your lips. yea verily. like a craftsman in her own shop; chisels come and go, but the cabinet stays in-mind. the flow of the task should never be kicked out of MIND by the act of execution.

→ THE GNOME SHELL

**Defer Interruptions:** the interruptions of today are the tasks of tomorrow. by allowing *in-hand* deferral, we clear the interruptions from our mind without them leaving a mark; as water through a sieve. having confidence they aren't lost frees their weight from our present thoughts. if it costs little to queue, we even defer triage for a better moment - maybe a minute later, maybe an hour later, sometimes a week later.

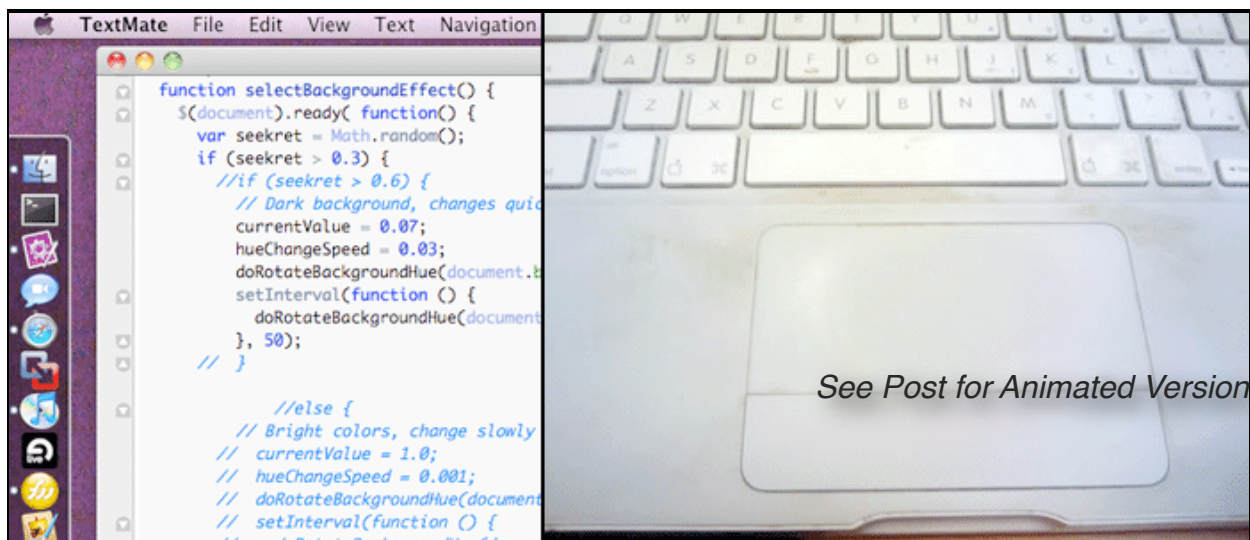


→ THE TASK MANAGEMENT POOPER

More Zuhanden. Less Vorhanden. Gotten bitten jah?

computers have a way of being vorhanden ( *present-and-at-hand* ), but not zuhanden ( *in-your-damn-hand* ). when a familiar tool is *in-hand*, it becomes a part of you: as much a part of you as your teeth. you do not feel its presence, it becomes an extension of your will, a transparent part of action.

**An *In-Hand* Shell:** the JEWEL that makes the interface disappear. map the edges of capacitive touchpads in absolute mode, allowing physical-subconscious access to action. for example, if you tap the edge of the trackpad on the right in the vertical center, you will have directly clicked whatever was on the right, vertical-center of the screen. want to do a edit-search? click the upper-left corner of the trackpad, slide down proportional to the height of the menu (menus are special, they are absolutely mapped too), and release. actions like switching windows take milliseconds instead of seconds as they become physical twitches. as they become physical, they disappear from the mind. like gestures & kbshortcuts without the recall → greater set of physical, effortless actions. and its more likely to be used.



→ PHYSICAL-ABSOLUTE TOUCHPAD MAPPING

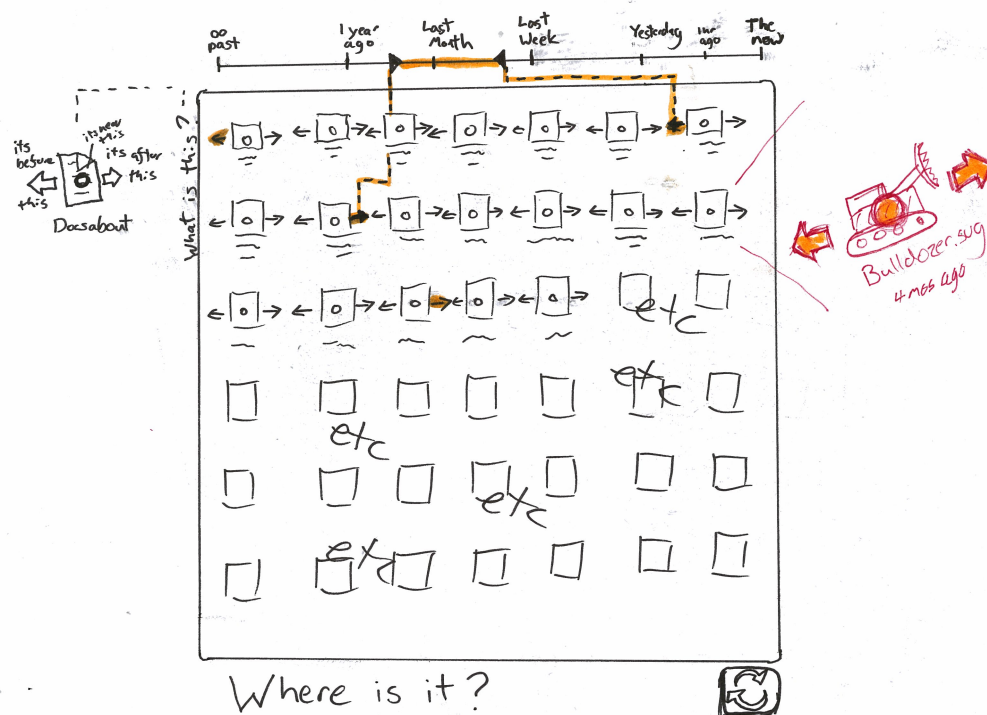
## High-concept ways to get things into your hands.

folders, launchers, stacks, search, window lists, recent files, file open boxes, file browsers, the places menu.... these are all ways of fetching objects into your hand, up on your screen, ready to use. folder→file has been the underlying mechanism of desktops for ages. and I want it to stay that way. the alternatives I have seen (particularly the task “hub” models found in phones, itunes, etc) are better geared toward consumptive use. that's a common use, but i'm not selecting it as the primary design case. let apple have consumption. folders have big problems, but lets try to ameliorate those problems.

**Recall access by leap search:** already provided by gnome shell. window key -> type -> enter. might be even better as "hold window key -> type -> release" ala gnome-do. jury's out and no-one is home.

**Window switching by activities:** already provided by gnome shell. xpose like switching integrated with workspaces. flexible rather than fixed number of workspaces encourage task-oriented tool layouts: setup a workspace for your current task. SEX APPEAL++: eventual possible integration with the task pooper: drag a workspace into the pooper as a task, and that workspace will disappear and pop out again at the specified date/time. treat workspaces as organized task spaces, and as the task itself. RAD RAD RAD.

**Getting things you can't recall:** finding THAT FILE can be a huge pain, esp for files you can't recall very well. you just want, you know, that file. you can't remember much about it, but you'll know it when you see it. BIG problem with folders, and search doesn't always work either -- even when the file is of a textual / searchable sort. anyone else notice that searching the gmail archive is getting difficult as several years of email accumulates? query-clause based searches are a pain... they mix mouse and keyboard, and they seem irritating to formulate.



→ SEARCH BY ITERATIVE DATE COMPARISON

**Project Oriented Access:** many files relevant access context is "over the course of this project". provide likelier-to-be-used simple drag-and-drop stick to panel file folder area to encourage this behavior where an individual finds it useful. See "Hierarchical File Access" below for more details.

## A Self-Hiding Bottom Panel that's there when you want it, not when you don't.

Self hiding panels free the screen visually from distraction, but they render the edge they're on 'tweaky'... you have to mouse carefully in that area, or you waste time getting the panel back in. Our panel will pop out when you hit it with "velocity".... like a push to click open cupboard door. Hovering near the panel will never trigger it. You could even rest your mouse on the edge, and it won't pop out. But throw the mouse at it a little (everyone does, for screen edges) at it'll pop out.

IT KNOWS WHEN YOU WANT IT. even better? it will pop out when you want to use it before you even hit it. turns out its simple and reliable (we hope, that's what the research says, at least) to predict when a mouse move is targeted toward a screen edge based on extrapolating its acceleration curve. if you start a move that will end on the panel, the panel will be popped open to meet you before you hit it. with any luck, it'll have popped open early enough that your use of the panel will feel like a single fluid gesture. not a down, wait, find, click. we can have our cake and eat it too.

We can even detect (now this isn't quite as reliable, we'll have to be careful) which button you're heading for. If the button expands as its default action (e.g. to show directory contents of the home folder) we can expand it by default. Maybe. This is more tenuous.

## The Task-Management Pooper



The task management pooper is based on research from PARC that found people used email as a primary task management tool: emailing themselves text snippets, files, and notes. The emailed things stand in for "written out linguistic/symbolic" tasks.

Email is not a bad tool. But we think we can work task management in so it is simpler. So simple that it becomes a 1s operation. So simple that task management serves to focus you instead of distracting you.

DRAG ANYTHING INTO THE POOPER as a task: text snippets, images, charts, files, contacts, emails. Whatever is the task, or represents it well for you.

DRAG WORKSPACES INTO THE POOPER AND SAVE COMPLEX TASK LAYOUTS FOR FUTURE DAYS/MONTHS/WEEKS this is well past the GNOME 3.0 horizon, but its a cool direction so I'll talk about it: we hope to support Windows and Workspaces as tasks too. Dragged in windows/workspaces would be serialized, and re-appear as you left them. Imagine working for an hour on a complicated terminal op that required six terminals open setup in specific screen locations, in hard to get back to directories. And you don't have time to work on the project for another week. With the task pooper, you don't lose your context... drag it in, and in a week (or earlier if you pull it out) the workspace will pop out ready to go, just like you left it.

SEX APPEAL++: eventual possible integration with the task-oriented workspaces: drag a workspace into the pooper as a task, and that workspace will disappear and pop out again at the specified date/time. treat workspaces as organized task spaces, and as the task itself. RAD RAD RAD.

SELF EMPTYING MEANS NO MESS, MEANS TASK MANAGEMENT DOESN'T FAIL BECAUSE YOU GET LAZY FOR TWO DAYS. the pooper bins are self-emptying. This is an intentional constraint, the kind of constraint that gives a thing meaning. Without this constraint, they become dumb folders, and they fill to the brim with junk. But the pooper is smart: it empties in a special way. When a task due, it pops out of the pooper. It sits at the bottom of the screen for several minutes (of use activity, it will just wait forever if you aren't using the computer... don't want to lose tasks just because you took a whizzzz!). If you ignore it, it will go into the archive (that's the 'O' to the right of the Calendar... ran out of hand drawing room).

THE ARCHIVE MAKES SELF EMPTYING NON-DESTRUCTIVE The archive is just a recency sorted infinite length list with a page fold of ~10 items. Nothing is deleted, but it encourages things not to be accessed from there as they fade into the infinite horizon.

DONT WANT TO DEAL WITH AN INTERRUPTION? POP IT BACK IN. Items popped out of the pooper will have a whack-a-mole down arrow above them. Whack it, and they are smooshed back into the pooper to pop out again (in ~1hr... exact bin sizes and number of them TBD). Like the snooze button. With absolute capacitive touchpad mapping, snoozing will be as easy as tapping the lower left corner of your trackpad. If this shit works like we hope, it'll become rather subconscious... you can do it w/o looking.... you can even tap w/o triage and triage later.

Want to re-assign it to a later date? Drag it to a later bin.

THE CALENDAR allows the especially organized to DnD tasks onto specific dates. When you drag onto it, it pops out immediately (using mouse target prediction, it'll even pop out if you just start moving toward it... allowing single-drag motions to the exact date you want).

WHEN YOU WALK AWAY FROM THE COMPUTER. When you come back and wake it up, it'll have the day's tasks popped out by default as a light reminder. If you click anywhere else on the screen, it'll just vanish. No fuss, no mess.

EMPTY ON USE. When you pop an item from the task pooper, that item is removed from the queue. This promotes an empty queue. Want it back in after you use it? Just drag it back in. NBD.



## Search by Iterative Date-Comparison

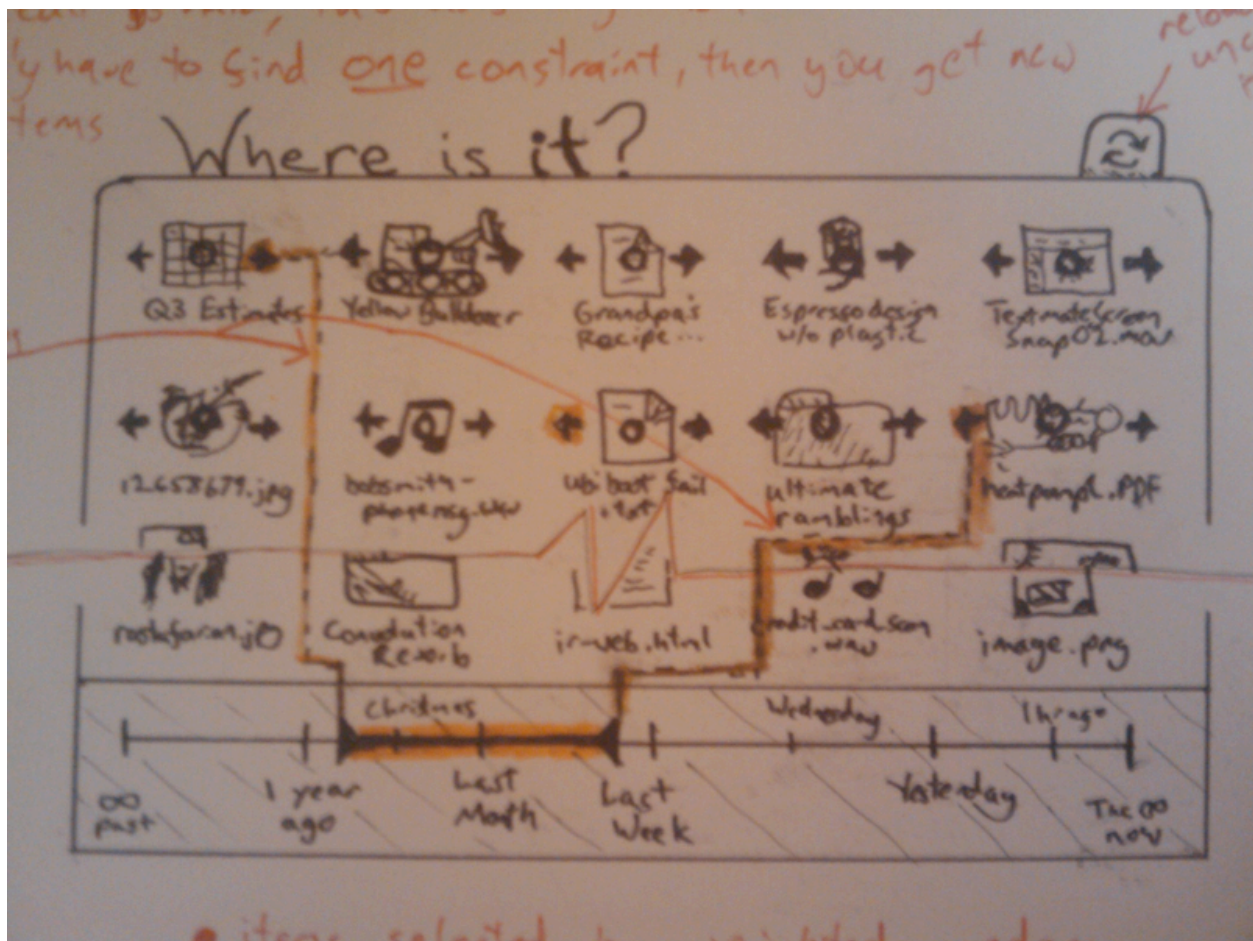
Search by iterative date-comparison is a way of finding files you don't remember the name of. Especially old but important files. In bad cases with existing search interfaces, this is sometimes a 30 minute slug fest, if you even find the file.

### BENEFITS:

- 1) This design allows locating files using only the mouse (its better to use either only-mouse or only-keyboard, mixing is a huge pain: see also 'query based' constraint searches... most of us don't add clauses like date ranges unless they are really desperate)
- 2) This design is based on recognition and episodic memory, but of which fit the human cognitive architecture quite well
- 3) The mechanism is easy to present in a very simple UI, and fast enough to use casually (you don't have to *really* want it to use it)

This mockups is much better than the other, but I don't have scanner until tomorrow, so its fuzzy:





The way it works is vaguely like quicksort partitioning.... you pick pivots, and partition the world up until you see the file you were looking for. The default axis of constraint is date. The reason is that dates are something every file has, and human episodic memory is very good at sequencing and remembering orders of events (in this case, objects stand in for the events they are associated with).

- 1) We start by displaying a weighted-random selected set of 30 or so files to start off with. The primary weight is for *monoliths*: files that were used intensely for a short period of time. These files leave the most distinct mark in your memory as far as time: they were big, but they weren't used all the time so they are easier to sequence against. See below for other weighting characteristics we might use.
- 2) Find one single file/email that you know was used before or after the file you are looking for. Then you click it was before/after/near the file in question.
- 3) All the files that don't meet the constraint are removed, and new ones selected. If you clicked near, the weighting is biased toward files near the one in question (relative to the current zoom).



- 4) After several clicks, you'll usually see your file. At any point you can hit the refresh button and reload the unconstrained files until you see ones you recognize constraints for.

OTHER CONSTRAINTS: you can right click on files and use them to add "like this" constraints. e.g. if you're looking for a google sketchup model, and you see another one in the list, you can right click and constrain to "I'm looking for google sketchup files", or "Images", or "Movies" or "C Code". Like-this constraints might include: file type, file size,

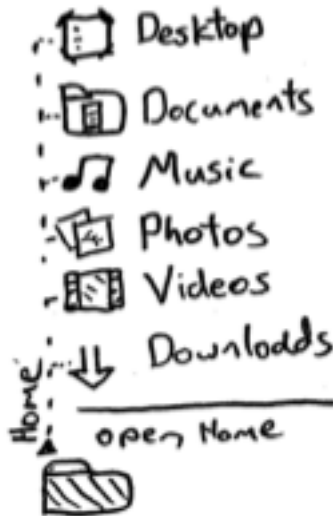
Other weighting characteristics may include: favoring files that have words in them (ode to peanuts.txt > 1893899.txt), files that were used for greater amounts of time, some file types may prove more useful than others (esp w/ respect to how easy they are to recognize in icon form), favoring variety (better to put unusual files, they are more memorable),

## Hierarchical File Access

we're still building atop a substrate of folders. we need more thinking in this area, but the desktop does get buried an awful lot, and it sucks having your most important to be in-hand objects buried behind a load of crap.

- 1) I believe the Places menu in GNOME 2 to be a failure. I don't think it is widely used (hello if you are one of the exceptions! don't worry, we aren't getting rid of it, just trying to make it more likely to be used!).
- 2) Its a small thing, but I partly attribute this to the places menus formatting... the folder icons used in most themes do not visually differentiate well when they are used together (fwiw, the HIG recommends against this sort of "badge a common visual substrate" sort of iconography, its much better to have distinct outlines).
- 3) Also, there are just too many damn folders in there.

I propose a single folder popout in the bottom panel: "Home" that only shows "Special" directories like "Downloads", "Desktop", "Music", etc and has only a single level of hierarchy. It also contains a link at the bottom that opens the home directory in Nautilus, allowing access to the rest of the items in Home.



The HOME button will be in the bottom-right corner allowing very fast access AND allowing guaranteed heading-for-this-item prediction. When you head for the home folder, it will almost always have popped out before you get there. This makes drags into special folders very very quick and easy.

THE CORNERS ARE PHYSICAL. being cornered, it also gets a double bonus combo from the physical touchpad hack. Accessing files means touching in the lower right corner of the touchpad, swooping up and releasing. The order and number of items is static, allowing muscle memory to develop. Want Downloads open? Get it open in less than a second without really thinking about it. Keep your focus on your work.

DRIVES ARE TO THE LEFT of the HOME folder. SD Cards, USB sticks, CDs, etc show up to the left. And that's it for "fixed folders".

TO THE LEFT OF DRIVES is a popup of recently used files across the desktop. Maybe it could have two sections: most recently used overall, and most recently used wrt to the current application.

FLEXIBLE 'PROJECT ORIENTED' FOLDERS TO THE LEFT OF THAT. drag any folder onto the 'greyed out folder' sticky place and it will, well, stick. we hope to encourage people to casually drop folders there while they are working with them, and put them away when they are done. further design toward this end to-be-done. As with the HOME folder, folders added here will benefit from fast physical access.

PROJECT FOLDERS IN FILE CHOOSER TOO. in the left pane. so you get double benefit from putting active work into the project folder area. cool.

# The Bottom Panel Overall

[ **taskpoopery** | **systrayoverflow?** | **userfolders** | **recentfiles** | **mounts** | **HOME** ]

(note that the mockups throughout this doc are out-of-date wrt to arrangements, this is more what I'm exploring currently)

Here's stuff you can access really easily, superfast, and physical with the absolute mapped touchpad.

*aka physical absolute touchpad mapping*

UPPER-RIGHT: fully physical, in-hand window switching. swipe-release from the upper right corner and you're in a new window. milliseconds, not seconds. focused like a laser.

LOWER-LEFT: current tasks, including pulling them out (see below, they are often files), or putting them in (if a file is selected, the top menu item in the task pooper is "add selected to queue")

LOWER-RIGHT: special folders: Downloads, Pictures, Desktop, etc

UPPER-LEFT: *td*

THE TOP: application menus - filesave, fileprint, search, replace etc become a single stroke from the top of the touchpad, volume control

THE BOTTOM: tasks, calendar, recent files, user folders ('project folders')

**AND THAT'S IT!** *There are major omissions, to be sure. I appreciate the work of the many designers who contributed to this document, and especially the GNOME Shell team for the courage to start something new, and for the bulk of the features and ideas contained here.*