post.it.nodes

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contents

Our product is called post.it.nodes.

It is an interactive system that aims to bring flow to work by bringing the relevant relationships between people, tasks and documents to surface, thus enabling the users to center their interactions around people and goals, rather than devices and software applications.

post.it.nodes was envisioned with significant inspiration from Mihaly Csikszentmihalyi's proposed psychological concept of flow.

" the relative rarity of flow experiences is due, by definition, to the fact that in everyday life the opportunities for action are seldom evenly matched with our abilities to act. "

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synopsis

We kicked off our research with user interviews. Questions were formulated for workers who dealt with shifts and information hand-off in their positions. The capture, communication and transfer of information were the focus of our query, as well as the relationship of that information with the workers and team members involved.

These exploratory interviews revealed to us that there is a need for rigorous documentation and standardized memory. Information gaps are rampant but face-to-face interactions are commonly used to fill them. A level of familiarity is required before starting any new task, which is usually resolved by shadowing or asking another worker for information.

These interviews lead us to ask: How might interaction design support workers in the context of a fluid environment, where there is constant change?

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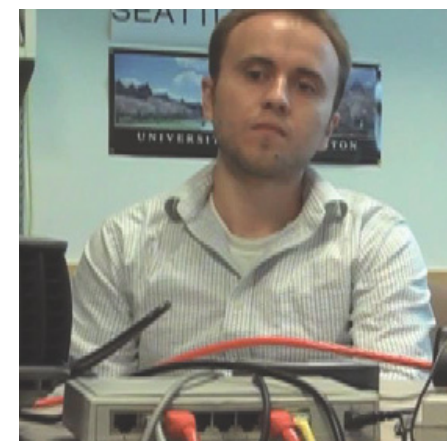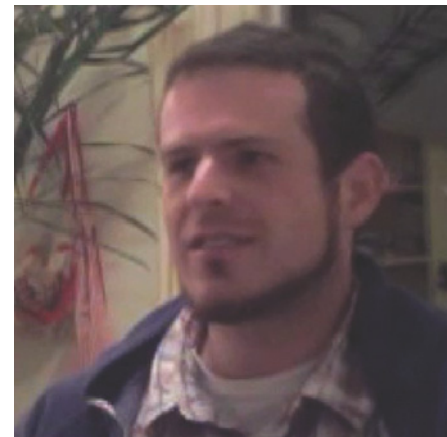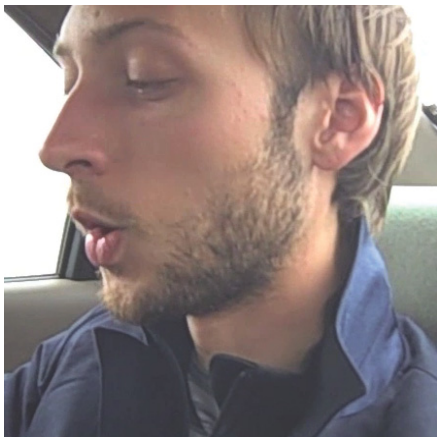
research

ideas

reward

Concrete and instant feedback on work-reward casual relationships enables workers to grasp the good they are doing. They will be able to comprehend the impact of their efforts before commitment to the tasks fade. Motivation and drive increase, and elevated productivity and self-satisfaction follow. Also, making informed choices about which tasks need attending to is daunting. What if a path of least resistance is charted to optimize the use of resources?

status

By providing real-time visibility to other team members' statuses, including areas of expertise, project involvement, resources, locations and availabilities, a worker can quickly and appropriately interact with teammates and better utilize coworker time and expertise. It will enable more efficient scheduling, interfacing, knowledge gathering and work assignment.

conflict

A little tension between workers sometimes keeps interpersonal dynamics at optimum levels. But what if the fluid and rapidly changing nature of future work caused excessive measures of conflict and undermined the performance of the individuals involved? Can conflicts at the workplace be resolved by enabling ambient intelligence that influenced the behavior of people?

tacit knowledge

Capturing and transferring tacit knowledge is a wicked problem. It is one which many people have attempted, and subsequently failed, to solve. Tacit knowledge only becomes apparent when it is in use, adding to the difficulty of unraveling the complexities behind effectively working with the information in the work place.

flow

Being in the zone - so in the moment that everything else falls out of focus - is where we perform at our highest levels. There is path of least resistance within our workday where we can leverage the connections within what we do and the tools we use to bring about a flow state within all of us.

If we understand the context of when we are at our best, we can work naturally with, instead of against, the ebb and flow that exists within our workday. The end result is less procrastination, easy returns to a productive focus after interruptions, and getting far more done - all with less mental overhead in the process.

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research

Review Progress

Understanding When I'm at My Best

Satisfaction

Feedback

Personal Control

Clear Goal

Ask the Right Question

Access to Information

Filter

Individual Flow

Writer's Block

Barriers

Other people

Increasing Flow in Work

Focus/Attention

Passive Sharing of Info.

Interruptions

How to Restart Flow

Cognitive State

Work with Human Nature

Challenge

Acquire Knowledge + Skills

Transitioning Knowledge from Informal to Formal

Shared Knowledge + Skills

Collaboration

Conflict Management

Communicating Current Status

Shared Goals

Finding the Missing Block

Group Flow

Coordination

Schedules

Efficiency

After looking at the big picture our affinity diagram and concept map formed, we decided to further investigate the notion of **FLOW** and how it could be achieved in work environments.

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research

Finding the problem space in the future of work was quite an undertaking. Although it was suggested that we focus on a particular worker in a particular situation, we decided to keep a wide scope to begin with.

The subject of flow was chosen because it is difficult to attain and sustain. This complication exists in a broad spectrum of professions and was deemed a rich area to explore for solutions.

Flow was to be paired with future work environments, which we have determined will be highly fluid and free of today's governments and massive corporations. The emphasis will be on the individual knowledge worker, who, in their daily work, can dynamically form temporary bodies with other workers across the globe and perform cohesively in handling projects and tasks. In these kinds of circumstances, how can flow bring productivity to workers who must manage their attention to efficiently work on projects?

problem

A worker can get more done if superfluous steps are removed, allowing them to focus on tasks rather than tools.

Can we lighten the cognitive load for complex tasks?

A few guiding observations and questions led us to tighten our problem area.

Relationships between projects, documents, and people are important.

Can relationships via the context in which a user interacted with a resource automatically be recorded?

People in organizations are resources that have fluid up and down time.

Can meetings, tasks, or things be arranged as they occur to facilitate this fluidity?

Choosing the right kind of communication at the right time can speed progress.

What is the appropriate channel of communication for each person at any moment? (email, phone, chat/IM, video)

Can we seamlessly bridge conflicting preferences?

problem

Personal Flow   Team
Help
Block

- This is work
- This is you trying to get work done
- There is a better way
Post.it.Nodes   idea/Quick
- Post.it.Nodes is/are
- You work with Post.it.Nodes by — exa
New
You co
① SHORTENING THE DISTANCE
BETWEEN YOU AND YOUR GOALS.
BY . . . .
Ⓐ GIVING YOU QUICK "EMBEDDED" ACCESS TO
THE PEOPLE, TOOLS, AND INFORMATION
8 WHAT YOU ARE DOING
Ⓑ KEE
BETWEE
RESOURC

GRANT WÜRNER
GEORGE
VIDEO
IM MAGNUS
P3

ideation

Our first iteration dealt with communication in context via medium agnostic channels of communication. For example, if one person prefers at this moment to communicate via phone but another finds it more convenient to communicate via text, then the tool should bridge their communication by translating the phone user's voice into text, and the other user's text into voice. This way, each user interacts simultaneously via their preferred method.

Scheduling in context will be a smart tool that arranges tasks in a way that optimizes flow. By observing the status of the work environment (meetings, team members' schedules, workload, resource availability, type of work, priorities, etc.), the tool can organize tasks in a way that maximizes efficiency and flow for the worker. We envisioned a learning system that can observe workers' behaviors and suggest optimal work patterns and plans.
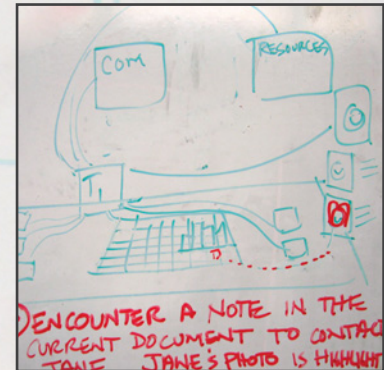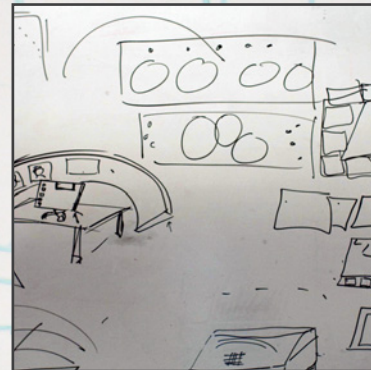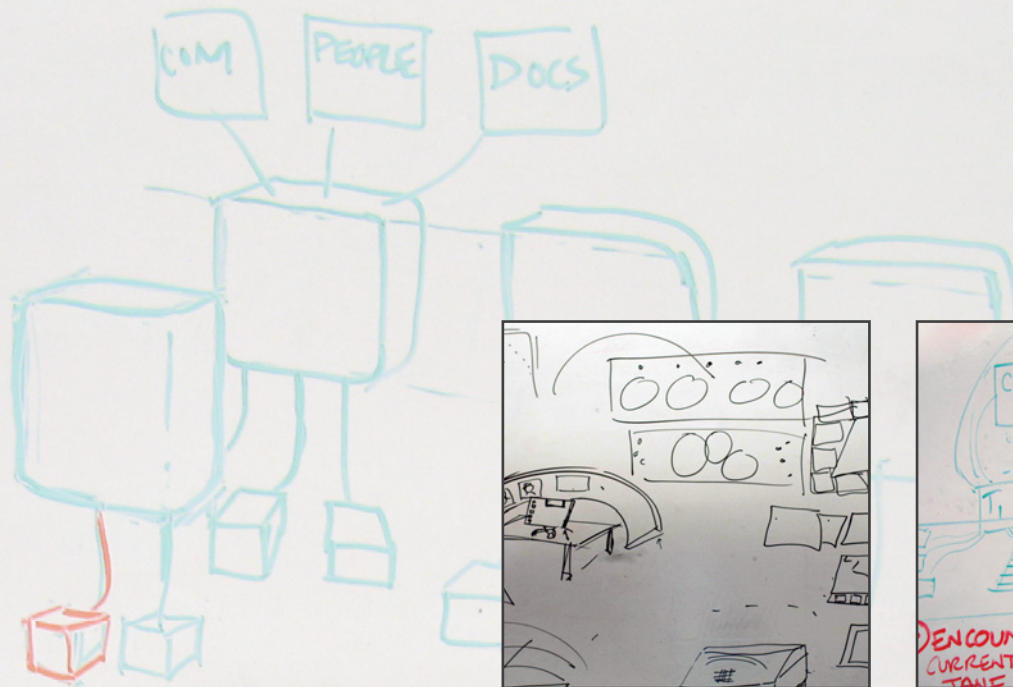
We explored the idea that a 3-D interface would be more intuitive and discoverable, while reducing cognitive load and distractions. In our vision, projects and tasks would be represented by interactive objects floating above a physical desktop. Related resources (communications, files, people) are collected in floating containers above the projects.These are attached to projects by lines and are visually exposed to allow a large amount of metadata to be intuitively conveyed to the worker. All resources related to a project are easily accessible via these portals.

Tasks protrude below projects and users select and activate them by "plugging" or "planting" them into the desktop. Completed tasks recede into the background but remain visible to convey a day's progress. Priority is conveyed by physical proximity to the user (i.e. important or urgent tasks would protrude more). This will help workers maintain focus on urgent or high priority tasks.
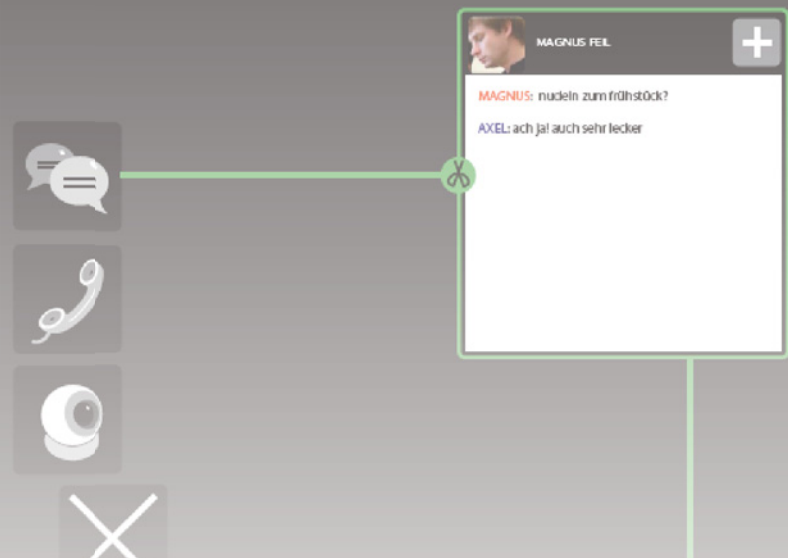
During video chat, the other party is projected across the desk from the worker. We felt that more realistic video presence encouraged more natural and higher quality communication.

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ideation

Our goal for this iteration was for communication to be matched with work to maintain flow - to enable contact in context.

The active project is selected and becomes slightly raised on the toolbar at the bottom of the desktop. Tasks that need to be completed can be accessed from this point.

For all incoming communication, a picture of the calling person is displayed along with a line indicating the mode of incoming communication. This allows the answering party to alter their own mode, if desired. If they choose to answer, they will communicate via their current default mode.

Communications are initiated by selecting a communication icon from the toolbar at the bottom left of the desktop. Workers select the communication recipient from a list and initiate the communication. They can set default or preferred modes for incoming and outgoing communications. Information about each person's currently preferred communication mode is displayed so those calling and answering can take this preference into account.

ideation

In our final iteration, the design scope once again expanded, but this time we limited our focus to three critical work areas: people, documents and search. Focusing on these prime interactions removed the most common sources of distractions and captured the relationships and crumb trails which are typically lost in the current desktop environment. In particular, collaboration, communication, and data provenance are automatically recorded so that these relationships now persist and are discoverable.

Our tool brings to the users' fingertips all the related resources associated with a project. Workers no longer have to search through expansive and cryptic network file systems, address books and other data sources to find the resources they need to perform work tasks. By bringing resources to the workers instead of forcing them to find them every time, we eliminated unnecessary time-wasting steps and reduced distractions that can pull a user away from their real work. In essence, this tool facilitates flow by cutting away distractions and making it simple and fast to find the resources needed at any particular moment.

Data in context is knowledge, and knowledge is money. Our tool collects and displays information that is rarely captured in current desktop environments. It records the context in which work actions are taken and it also builds relationships between related resources. For example, while Project A is active, all communications, documents, and searches performed are automatically associated with that project. Search tools leverage the current user and project context to more intelligently mine and filter data. Explicit recording and exposure of relationships between resources can reveal previously undetected information about a project.

final iteration:
facilitating flow through context

ideation

documents

communication

people

task

list

people+

communication

post.it.nodes, in its current phase, is rooted around four components: a to-do list for tasks to be accomplished, contacts coupled with modes of communication, documents relevant to the tasks and contextual web search. These chief interactions will allow seamless switching between tasks, contacts and documents.

search

web

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design

task list

It all starts with a list. Begin a new project task list by grabbing a post.it.node from the pad in the upper right corner of the desktop. Drag the turned corner onto the desktop and start typing action items into a list in the center of the post.it.node. Individual list items can then be dragged onto resources (people, documents, or searches) to make contextual connections between the list items and the resources.
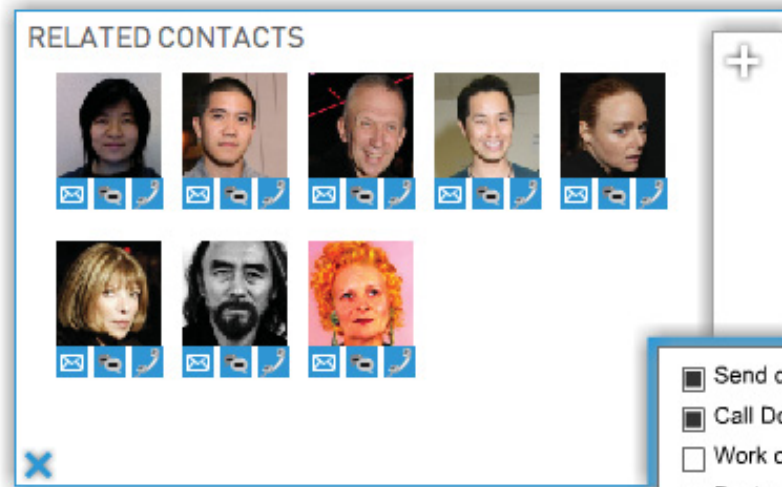
design

RELATED CONTACTS

Send draft article to Steve
Call Donna about Thursday's meeting
Work on proposal for conference
Post new review to blog

PROJECT: DEEP BLUE
DATE: JUNE 2

People who are associated with the project are accessible via the top left corner of the post.it.node. Hover the mouse over the corner, and a list of people related to the project appears. Underneath each person's photo are buttons to begin modes of communication. Photos can be dragged onto documents to create associations between people and documents.

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design

RELATED FILES & APPLICATIONS

	allenlau_resume.pdf	36 KB
	lead_i10p38_40.pdf	956 KB
	Ocean_Study_DRAFT.pdf	624 KB
	Statement_Dec 2008.pdf	104 KB
	tabletop2008_shapetouch.pdf	412 KB
	UoW1374.pdf	432 KB

■ Send draft article to Steve
■ Call Donna about Thursday's meeting
☐ Work on proposal for conference
☐ Post new review to blog
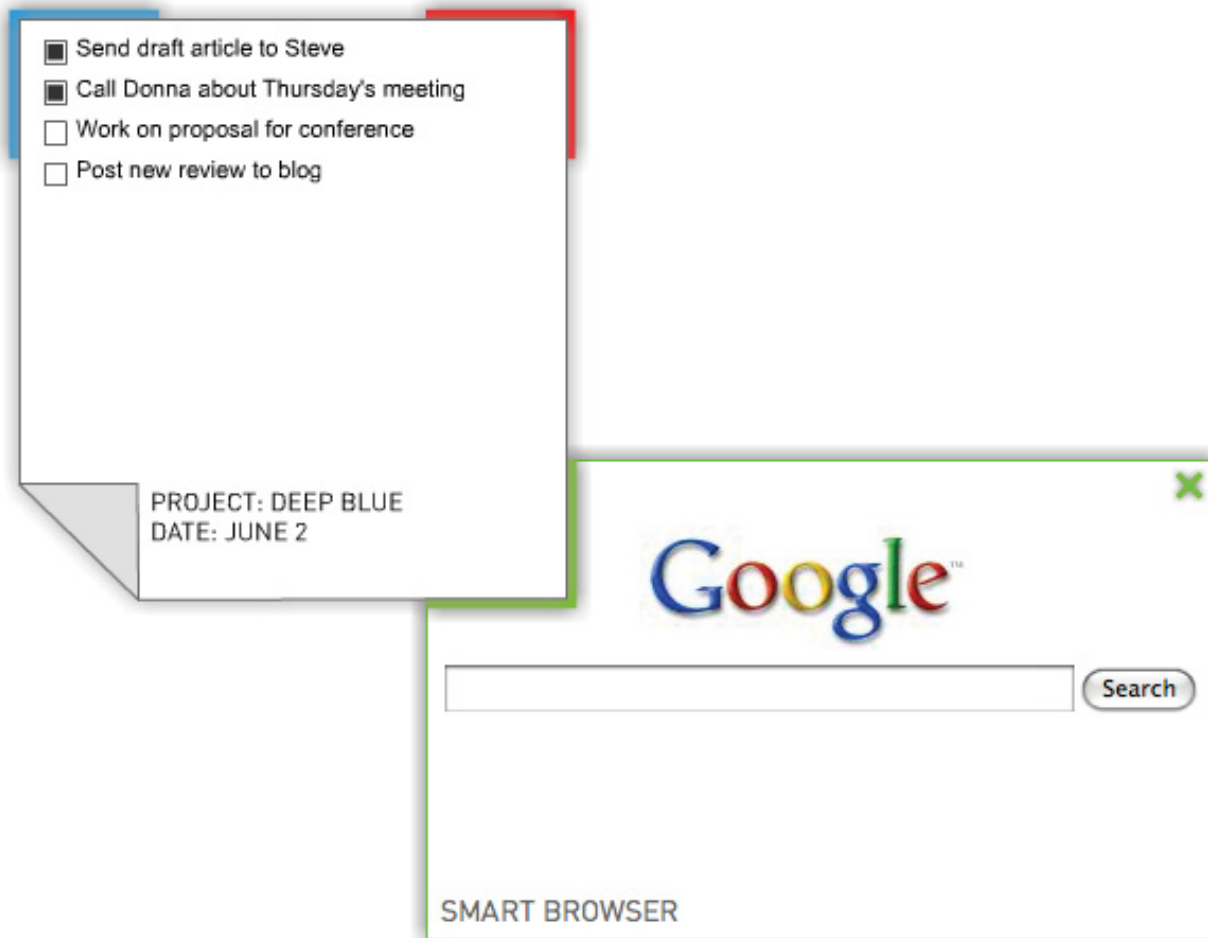
PROJECT: DEEP BLUE
DATE: JUNE 2

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Documents opened while a project is active automatically become associated with that project. (Documents could be associated with more than one project). Related documents can be found instantly by hovering the mouse over the upper right hand corner of the post.it.nodes. A selectable list of associated documents appears.

design

Smart search is activated by hovering over the lower right corner where a contextual search tool resides. Search within the context of the current project to better target and filter results. Contextual searches reduce time wasted sifting and filtering through unrelated data and pages.

■ Send draft article to Steve
■ Call Donna about Thursday's meeting
☐ Work on proposal for conference
☐ Post new review to blog

PROJECT: DEEP BLUE
DATE: JUNE 2

Google

Search

SMART BROWSER

design

web search

what worked for me was keeping a deep archive of my personal design ideas, quotes from meetings, and reflection/summaries of our progress within the design process.

i'd like to develop the concept a bit further, especially the predictive capabilities and organizing workflow to induce flow states

lessons learned

general thoughts

for the future

we did not take full advantage of the participatory design methods, which might have been helpful and perhaps broadened our horizon. getting the user opinion in the design phase is something to be tried in future efforts.

just when i started to think that the idea of keeping the concept broad was not working, a valuable gem popped up and ultimately became our final product. that was very pleasing, however it also left a seed of curiosity in my mind. what would have been different if we picked a less abstract direction in the beginning?

as a next step, i would like to investigate the communication component of our product. can we introduce a new medium of communication that combines the traditional methods we are utilizing now (phone, IM, video-conferencing) but still bring innovation?

it was difficult designing for an ideal state such as flow, especially considering all the variables that get in the way when you consider flow in the context of work.

the lure of designing something ultra-futuristic was very strong. we tried to steer our design process but it refused to be reined in until the very end.

i'd like to move this out of the 2-D and into the 3-D... and perhaps involve some robots.

the larger the quantity of creative people on a team, the longer it takes to select and develop good ideas, both because there are more good ideas to choose from, and also because there is valuable, albeit sometimes laborious, critical input going into each step.

i was surprised by the progression and iterative cycles of our design ideas. we would consider something, throw it out, only to return to it later and consider it again, often in a new context.

we had considered a more complete "operating system" of interconnected documents and resources but the scope felt too large to tackle in our time frame. I would like to continue to develop this concept and see how streamlined we can make the work process.

reflections