Microsoft Research
Faculty Summit 2010
Design Mind + Engineering Mind
Secrets to Designing Compelling Product Experiences

Surya Vanka
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La figura di Vitruvio rappresenta la proporzione ideale dell'uomo. Le linee che circondano il corpo sono coordinate geometriche che definiscono la figura umana ideale. Queste linee sono spesso utilizzate come base per la progettazione di architettura e ingegneria, e riflettono la fusione tra la scienza e l'arte che è tipica della cultura umanistica.
DIALOGO
DI
GALILEO GALILEI LINCEO
MATHEMATICO SOPRAORDINARIO
DEI STUDI DI PISA.
E Filosofo, e Mathematico primario del
SERENISSIMO
GR. DUCA DI TOSCANA.

Due ne i congressi di quattro giornate si discorre sopra i due

MASSIMI SISTEMI DEL MONDO
TOLEMAICO, E COPERNICANO;

Proponendo indeterminatamente le ragioni Filosofiche, e Naturali
tanto per l'una, quanto per l'altra parte.

CON PRI VILEGI.

IN FIORENZA, Per Gio. Batifà Landini MDCXXXII.
CON LICENZA DE' SUPERIORI.
Above: At the request of Chrysler Corp., Geddes did proposals for a Plymouth Airflow. Left: Geddes’s design firm also did a great number of drawings for more graceful Chrysler and DeSoto Airflows; two are shown here.
1985: Windows 1.0
The value of design has changed...

Luxury

The value of design has changed...
the lifecycle of technology products

From Sony’s “Digital Dreams: The Work of the Sony Design Center” by Paul Kunkel
The lifecycle of technology products

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Loyalty
Trust
Amount spent annually on TV advertising: $90 Billion

TV In The Dark, Bryan Keefer, Columbia Journalism Review, 2007
Only 40% of consumers have any positive opinion on advertising
Only 22% of advertisers believe that TV ads are effective.
Only 6% of consumers say they believe ads
Power Shift

Economy of Scale > Economy of Choice
Simple markets > Complex markets
National markets > Global markets
Opportunistic > Cynical Consumers
Extrinsic Value > Intrinsic Value

Patrick Whitney, Illinois Institute of Design, Chicago
Producers were powerful
Consumers are powerful
Markets of one
menu commands in Word over time

complexity
200+

NUMBER OF PRODUCTS WE RELEASED LAST YEAR

pace
1,000,000,000

NUMBER OF USERS OF WINDOWS IN THE NEXT DECADE

scale
diversity

130+
NUMBER OF LANGUAGES SUPPORTED BY WINDOWS
NUMBER OF SOFTWARE COMPANIES WORLDWIDE WHO BUILD PRODUCTS THAT RUN ON WINDOWS

~650,000

Partnering
collaboration

360+

NUMBER OF INTERNAL PRODUCT DEVELOPMENT TEAMS
technology innovations are successfully mastering complexity
the real innovation challenge today is to master simplicity
wicked problems
Left Brain
uses logic
detail oriented
facts rule
words and language
time aware
can comprehend
order/pattern perception
knows object name
reality based
forms strategies
practical
safe
Right Brain
nonlinear
"big picture" oriented
imagination rules
presents possibilities
uses feeling
symbols and images
meaning-centered
believes
appreciates
spatial
fantasy based
risk taking
Whole Brain Creativity
Deductive
Abductive
people first
experimentalism
optimism

POSITIONING MATRIX

organic

wild

architectural

mild
Collaboration
Observation
Laseau’s Funnel

ELABORATION
Opportunity-seeking:
From singular to multiples

REDUCTION
Decision-making:
From broad to specific

STARTING POINT

DESIGN PROCESS

FOCAL POINT

Laseau 1980
1. you can’t know the tiger until you live in the jungle
Living with Windows
2. gather deep user evidence
1.2 billion
DATA SESSIONS COLLECTED

1.8 million
SESSIONS PER DAY

352 million
COMMAND BAR CLICKS (90 DAYS)
3. understand intimacy & scale
Classic ethnographic research
Classic behavioral research
Scaled Intimacy
Wired

The Game

Blackout

Hackers take down the most wired country in Europe

Halo 3

How Microsoft Labs invented a new science of play

Plus

World's cheapest phone

Surrounded by total cludge

The lines we live

online

By Clive Thompson
create rich evocative models
November 14, 2005

Dear Valued Customer,

Thank you for allowing us to provide you with the highest quality imported and domestic specialty foods. As you know, Contoso has been the leading gourmet food supplier in the Pacific Northwest for over 25 years. With thousands of satisfied customers, we are certain you will find the quality and value you are looking for.

Enclosed is our updated product catalog and price list. I would like to take this opportunity to highlight just a few of the new exciting foods we are offering this season:

<table>
<thead>
<tr>
<th>Product</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sir Rodney’s Marmalade</td>
<td>Specialty Biscuits, Ltd</td>
</tr>
<tr>
<td>Ravioli Angelo</td>
<td>Pasta Buttini Co</td>
</tr>
<tr>
<td>Ipoh Coffee</td>
<td>Leka Trading Co.</td>
</tr>
</tbody>
</table>

We are proud to offer you a wide selection of products from around the world. Our highly trained staff is constantly searching for premium products at the best prices.
Contoso
234 Main Street
Seattle, WA 98122
425-882-8000

November 14, 2005

Dear Valued Customer,

Thank you for allowing us to provide you with the highest quality imported and domestic specialty foods. As you know, Contoso has been the leading gourmet food supplier in the Pacific Northwest for over 25 years. With thousands of satisfied customers, we are certain you will find the quality and value you are looking for.

Enclosed is our updated product catalog and price list. I would like to take this opportunity to highlight just a few of the new, exciting foods we are offering this season: Sir Rodney’s Marmalade by Specialty Biscuits, Ltd; Ravioli Angelo by Pasta Buttini Co; and Ipoh Coffee by Leka trading Co.
5.
build virtuous feedback loops
We're glad to hear that you've had a positive experience with Windows. Please tell us about it!

[Customer types a comment in here and clicks "Send a Smile"]

The snapshot below will be sent with your comments. If the picture is not current, refresh it or press F10.
6. co-creation
What’s Connect?

This site is a connection point between you and Microsoft, and ultimately the larger community. Your feedback enables Microsoft to make software and services the best that they can be, and you can learn about and contribute to exciting projects. Learn more.

JOIN A CONNECTION - and try out new products

**Design:** Live Mesh Beta

**Server:** Parallel Extensions to the .NET Framework

**Server:** SQL Server

REPORT BUGS - like this one

**Rating:** 4.9 after 65 ratings

*License.licx always checks out when modifying a form*

From Connection: Visual Studio and .NET Framework - English

We have a problem with multiple developers working on a windows form project in Visual Studio 2005. Everytime you make any change to the Interface, even if it is just moving a control on a form, the I...

Updated 11 weeks ago | Closed (fixed) | 65 ratings | 32 validations | 3 workarounds | 11 comments

SUGGEST FEATURES - like this one

**Rating:** 4.9 after 14 ratings

*Add support for multi-subnet clusters*

From Connection: SQL Server

SQL 2008 should add support for clusters with nodes running on different subnets. Lack of support is a huge blow to the multi-site clustering community as SQL is probably the number 1 clustered application...

Updated 1 week ago | Active | 14 ratings | 5 validations | 2 workarounds | 3 comments

What others are saying about Connect

“That’s the bug I posted to Connect: they fixed it! Thanks to the OneNote team for really listening.”

- OneNote customer

“I never thought I’d actually communicate with a developer, until it happened.”

- Jim B.

“By the way. Connect, thanks a lot for listening to your customers.”

- Craig T.
7. validate with user data lead with design
100th Window
Massive Attack
9 tracks  72:36  2002
fail fast
9. invent new paradigms
10. simplicity is hard but worth striving for
Change the appearance of a table of contents, index, table of authorities, or table of figures

1. On the Insert menu, point to Reference, click Index and Tables, and then click the tab you want.
2. In the Formats box, click From template, and then click Modify.
3. In the Styles box, click the style you want to change, and then click Modify.
4. To add the new style definition to your template, select the Add to template check box.
5. Under Formatting, select the options you want.

Notes

- To change the appearance of a table of contents in a Web frame, you must first position the insertion point inside the frame that contains the table of contents. To change the appearance of a table of contents in a Web frame that uses hyperlinks, change the properties of the hyperlink style.
- To edit the task of an individual entry, locate the source of the entry, modify it, and then update the entire table of contents, index, table of authorities, or table of figures.

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find and use
use and find
Why Use this Methodology?

Most Usability Engineers who conduct site visits use the Contextual Design methodology, or some ethnographic/anthropological method. These methodologies combine a combination of visiting users in their work environments, capturing data, creating “models” of users and their environments, and then translating those models into design specifications.

However, in practice, most of these efforts lose steam after the site visit phase of the process is finished. Copious work may be put into creating models of the users and their work environments; however, this work usually ends up being done by a lone usability engineer, and perhaps a sympathetic developer. Generally, by the time the models are done, they are never actually turned directly into specifications; often the product team has even left the initial specification stage before the modeling is even complete. Moreover, the final step of producing a report and pushing the results is often lost on
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Moreover, the final step of producing a report and pushing the results is often lost on the organization.
11. never sacrifice clarity for depth
12. experience can be measured
Windows Vista Client Usability

78% Task Success
100% RC1 Exit Criteria Met

The UX Portal showcases real data from real Windows Vista users. Current Usability Health Scores, which represent the state of key end-user Experiences, are based on usability evaluations of recent Windows Vista builds. By drilling into an Experience, you can see more detail on bugs and issues that have been filed to track improvements. Learn more about how tasks are chosen, evaluated, tracked, & improved.

Task Success by Experience Area
designers

engineers
envision boldly
design thinking
give it away
open it up
creative thinking spaces
deferring judgment
prototyping
macro + micro

design thinking
genius > coach
give it away
doing > facilitating
design charettes
courage + conviction
release team creativity
mapping
storytelling

design thinking
genius > coach
give it away
doing > facilitating
design charettes
courage + conviction
release team creativity
mapping
storytelling

design thinking
genius > coach
give it away
doing > facilitating
design charettes
courage + conviction
release team creativity
mapping
storytelling

raise design IQ
diagramming
courage + conviction
prototyping
fail fast
aise design IQ
diagramming
courage + conviction
prototyping
fail fast
innovation in the design of the culture can be far more impactful than just innovation of products and services
“Business people don’t just need to understand designers better – they need to become designers”

- Roger Martin
d

D
Relationships and Roles for Design in the Organization

- resource to organization
- part of organizational system
- core to organization
- design is the organization
“If you’re not busy being born, you’re busy dying.”
Thanks.

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