

[Multitouch & Natural User Interface]

[Opportunities for a Bottom-Up approach]



[Laurent Salat]

[A story about frogs & pans...]



[A story about frogs & pans...]

“C’est cette étreinte incessante de notre propre technologie qui nous jette comme Narcisse dans un état de torpeur et d’inconscience devant ces images de nous...”

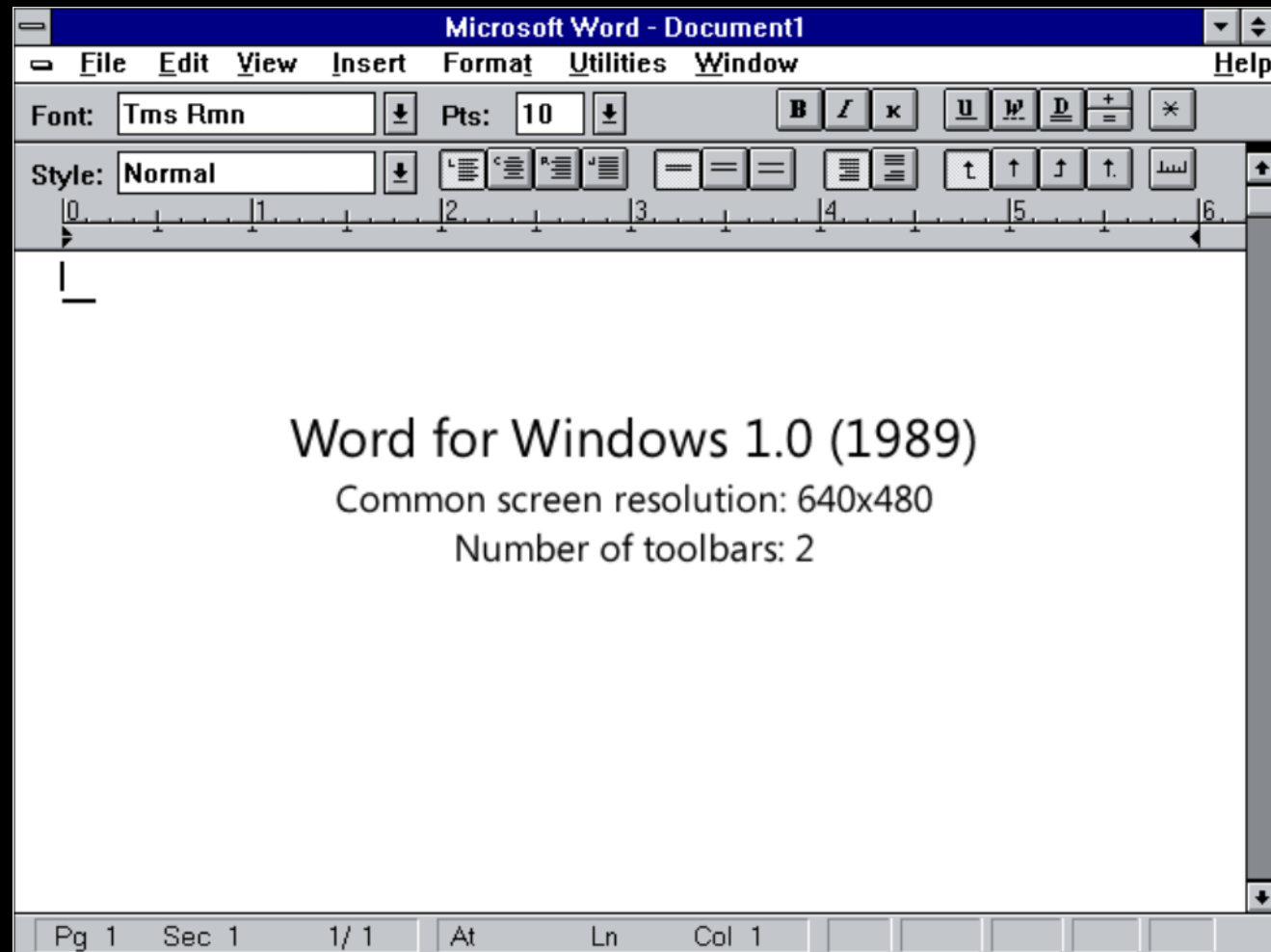
Marshall Mac Luhan (Pour comprendre les média)



[About complexity of our “tools”...]



[About complexity of our “tools”...]



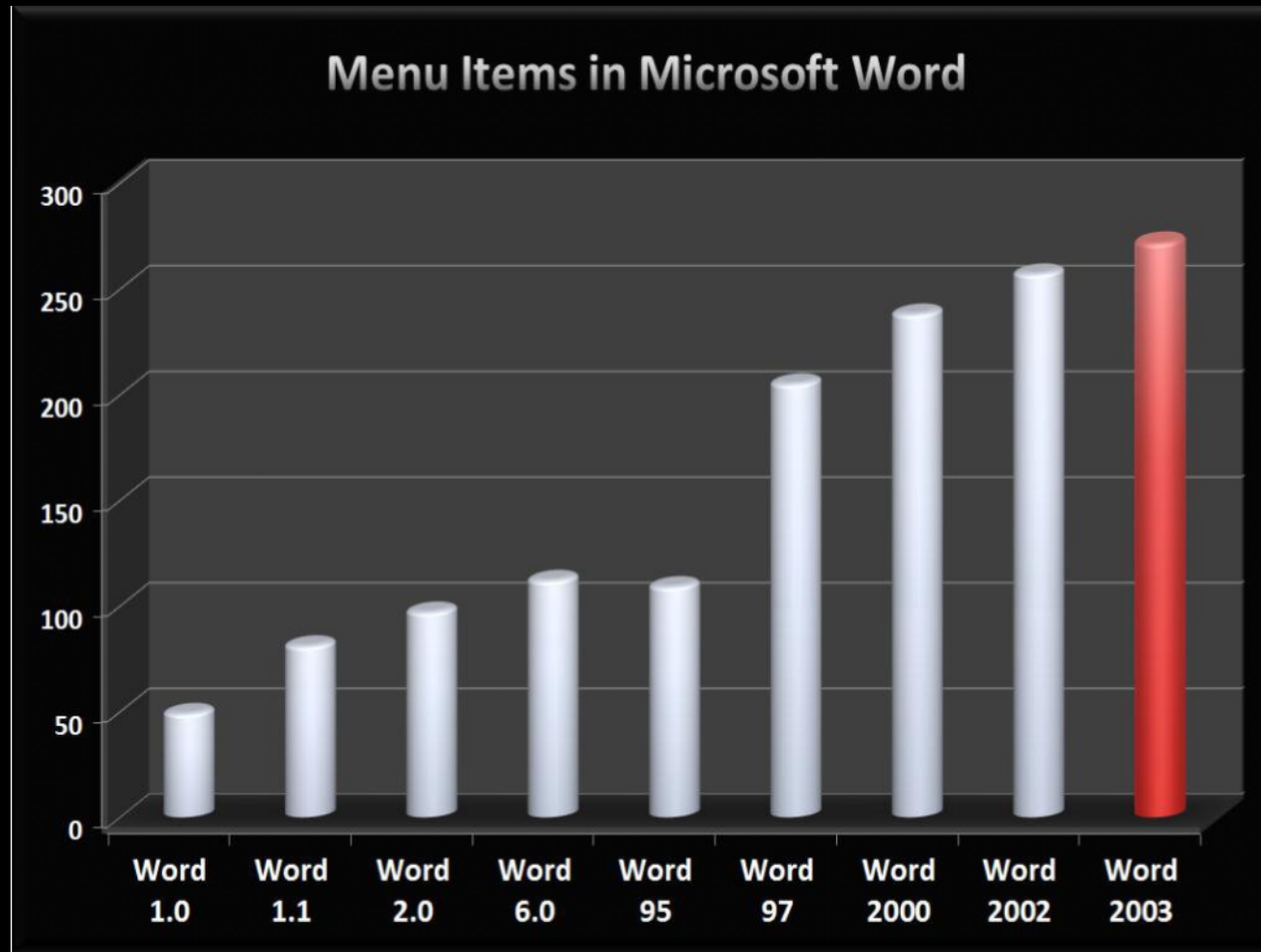
[About complexity of our “tools”...]

The screenshot displays the Microsoft Word 2007 interface. The main window shows a document with a table containing four columns labeled 'Value1', 'Value2', 'Value3', and 'Value4'. A search results pane is open on the right, displaying 30 results from Office Online. The search results include:

- Update an index, table of contents, table of figures, or table of authorities
- Change the appearance of a table of contents, index, table of authorities, or table of figures
- Delete an index, table of authorities, or table of figures
- Split a table
- Table of Contents II: Advanced TOCs, long documents, and other tables

The search results pane also includes a 'Search' section with the search criteria: 'Microsoft Office Online' and 'tables'. Below the search results, there is a 'Please let us know if this content was helpful' section with a star rating and a text box for feedback. The status bar at the bottom shows 'Page 1 Sec 1 1/1 At 1.1" Ln 2 Col 1' and the system tray shows the time as 3:45 AM.

[About complexity of our “tools”...]



[About the meaning of words]

habitations

Type de poste

- Temps plein
- CDI

Expérience

2 à 5 ans

Niveau d'études

DUT, BTS, Bac + 2

Niveau de poste min.

Confirmé / Senior

Salaire

2 500,00 - 4 000,00
EUR /mois
Voiture, mutuelle,
prévoyance,
participation

Description du poste

Votre mission

Rattaché au Responsable des ventes, vous participez au développement commercial de cette structure à taille humaine et êtes force de proposition dans le cadre de sa croissance, vous aurez en charge de:

- la définition et la mise en œuvre de votre plan de prospection en collaboration avec votre responsable
- l'entreprise contribue à l'apport de contacts additionnels : showroom, publicité, promotions...
- l'animation et la fidélisation de la clientèle (conseiller, évaluer, aide et conseil technique)
- la négociation avec les clients
- le développement de votre chiffre d'affaire

Votre profil

Doté(e) d'un fort tempérament commercial, vous justifiez d'une expérience réussie dans la vente directe de produits similaires en B to C.

Véritable conseiller technique et possédant une grande capacité d'adaptation, vous souhaitez vous investir dans une PME dynamique. Votre détermination et votre envie de réussir sont autant d'atouts qui vous permettront de vous épanouir dans ce poste.

Vos compétences

Expérience de vente auprès des particuliers exigées. (le domaine des fenêtres ou portail, porte de garage sera apprécié.

Doté(e) d'un bon relationnel, vous êtes rigoureux, autonome

Vous maîtrisez l'outil bureautique.

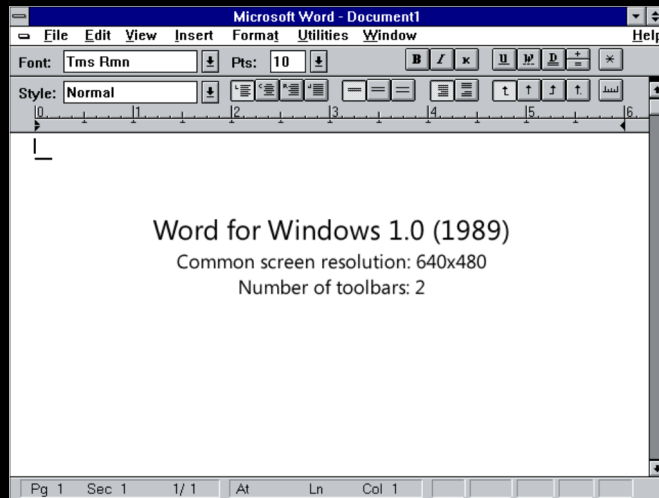
Contact

Scintelle

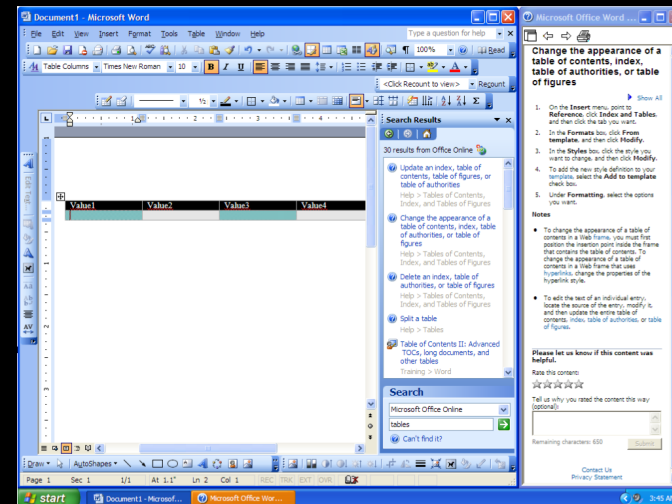
Vous maîtrisez l'outil bureautique



[About the meaning of words]



A Tool



A Workshop



[About the meanings of a word]



A Workshop



A Workshop



[Natural User Interfaces
&
Bottom-Up approach]



[Natural User Interfaces]

“A natural user interface is a user interface designed to reuse existing skills for interacting directly with content.”

J.Blake (Multi-touch development With WPF and Silverlight)

“An interface is natural if it exploits skills that we have acquired through a lifetime of living in the world.”

Bill Buxton (CES 2010)



[NUI & OCGM metaphor]

Childhood cognitive development

- Perceptual object categorization : 9 months old
- Recognition of containment relationships : 6 months old
- Recognition & use of gestures : 9-12 months old
- Manipulation of objects : 6 months old

R.George & J.Blake (CHI 10)



[Cognitive development & Games]

J.Piaget's theory about childhood cognitive development

- Sensorimotor stage (from 0 to 2 y.o.) : Exercise games
- Preoperational stage (from 2 y.o.) : Symbolic games
- Concrete operational stage (from 6 y.o.) : Construction games
- Formal operational stage (from 11 y.o.) : Ruled games

J. Piaget



[Games & cognitive development]

Concrete operational stage

Understanding of mental operations.

Children begin thinking logically about concrete events and objects.

Logic, Induction, Reversibility, Trial & Error.

Formal operational stage

Ability to think about abstract concepts.

Logical thought, abstract thought, deductive reasoning, systematic planning.



[Learning]

Learning by action

Action & Retroaction (Trial & Error)

Analysis of results helps to learn.

Learning by tutorial system

Communication of knowledge by a tutor or a tutorial



[Top-Down & Bottom-Up Interfaces]

- A Top-Down interface exploits skills that we have acquired during Formal Operational Stage. It encourages learning by tutorial system.
- A Bottom-Up interface exploits skills that we have acquired during Concrete Operational Stage. It encourages learning by action.



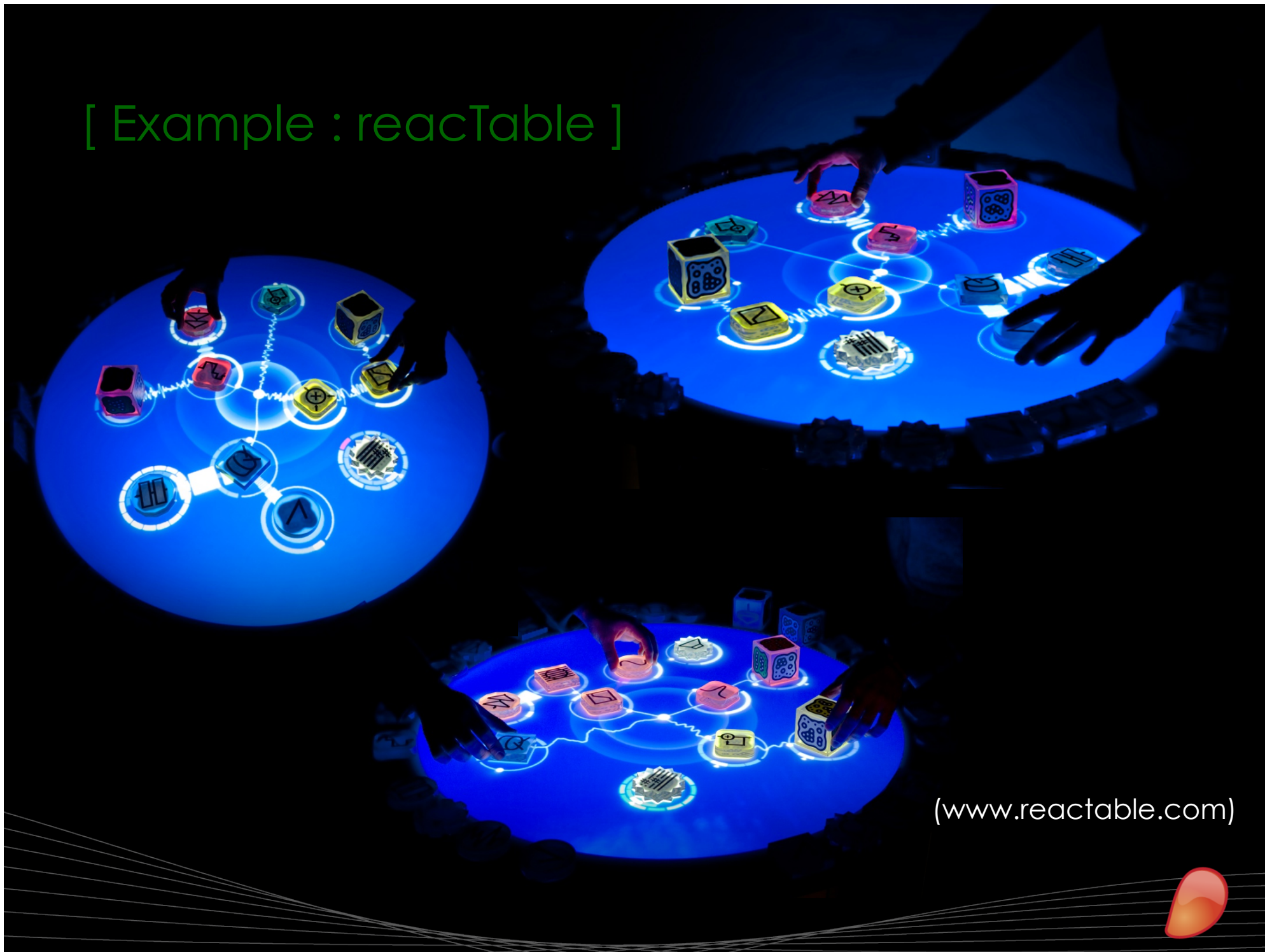
[Bottom-Up Architecture]

Architecture built upon 4 concepts :

- Workspaces
- Data
- Operators
- Stores



[Example : reactTable]



(www.reactable.com)



[Example : iPhone & AppStore]



(www.apple.com)



[Top-Down et Bottom-Up Interfaces]

NUI should encourage Bottom-Up interfaces

- to encourage use of skills acquired early during our life,
- to decrease cognitive load related to learning and use of interface,
- to decrease cases and length of « Top-Down » phases (analysis of interface) between Bottom-Up phases (working on task).

Especially when learning by tutorial is not possible.



[Q & A...]

...et une maxime pour la route :

**“I hear and I forget.
I see and I remember.
I make (with my hands) and I understand.”**

Confucius (Ergonomist / 551-479 av. JC)



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