ECOLOGICAL INTERFACES

MAKING THE DIALOG BETWEEN HUMAN AND MACHINES EASY

When a software is to be used by people, most of the time this software has what is called a graphical user interface (GUI) enabling a dialog between the user and the machine. On such interfaces, the user will have access to many functions. Great care needs to be taken to build the graphical user interface (so that functions of the software can be perceived) and facilitate the human-computer interaction (so that the functions of the software can be used).

To establish this dialog between the human and the machine, the graphical user interface which is perceived should be designed with great care so that the communication between the human and the machine is natural. If the learning curve is too high, if the interface cannot be understood, the user will most probably have difficulties to use the software or will dislike using it. In both cases this is not something acceptable.

WE USE PSYCHOLOGY, ERGONOMICS, NEUROPHYSIOLOGY...

Objects (icons giving access to functions, input zones..) that are manipulated on the software should be designed and represented in a way that users can understand these objects easily. We need to pay attention to human factors and ergonomics and design products, systems, or processes to take proper account of the interaction between them and the people who use them.

When taking about the human-machine interaction, ergonomics is an

Beamak SAS
58 route Nationale
80500 Contoire-Hamel
France

Phone
+33 763 633 003

Mail
info@beamak.com

Follow us on Twitter
@BeamakSAS

www.beamak.com

Jurisdiction
RCS Amiens

SIREN
834 482 937

Represented by
Mark Pohlmann

important thing to consider. If the graphical user interface that we have to use is not build in a way that we can interact with it then we will most probably not use it or will dislike using it.

But this is not enough! We also need to make it easy for users to use the software. In cognitive psychology, cognitive load refers to the total amount of mental effort being used in the working memory. Heavy cognitive load can have negative effects on task completion. Taking care of this will provide a better human-machine interface. The less cognitive load we will have to process the information, the less buttons we will have to use, the better it will be since less mental processes are involved. We will have as a result a so called ecological user interface.

AND WE ALREADY HAD SUCCESS WITH THIS APPROACH

For a leading insurance company who had the need to understand how to create a user friendly interface for their onboarded driving assistant, Beamak did a psychophysiological experience to understand which kind of stimuli should be used (image vs sound) to establish a communication between those digital assistants and passengers. A link between the neurobiological involved processes and the involved mental and cognitive activities was established to make sure that the cognitive load is as low as possible (image, sound, icons, colors, etc...) to ensure that the information provided by the digital assistant to the driver can be used very easily in decision making processes to enhance safety.

Beamak - We make machines think !

Beamak was created in 2016 by Cognitive Psychologists who worked for the French National Center for Scientific Research (C.N.R.S.) and the Computer Science Laboratory for Artificial Intelligence (LAFORIA).

Our functional cognitive architecture using core Psychological components brings to AI engines the ability to understand a context and adapt their attitudes to act and communicate. These components are using Beamak Smart Neuron concept which is processing data in a natural way.

Beamak is helping companies worldwide to accelerate their digital transformation by creating and designing AI solutions which includes cognitive and psychological features.

Founders of Beamak worked for over 20 years for leading consulting and technology companies such as Andersen Consulting, Accenture, Cap Gemini or Hewlett-Packard, managing over 200 projects for Fortune 500 companies in EMEA.

At Beamak, we love what we do and we stick to our promises. We would be glad to be part of your next journey.

Looking forward to work with you soon...