What exactly is Nonstandard Architecture?

Nonstandard Architecture is a movement which recently culminated in the Non Standard Architectures exhibition in Centre Pompidou in Paris, December 2003. Before the NSA exhibition a series of Archilab conferences were organized by the Centre Frac in Orléans, France. The first and most influential Archilab was held in 1999 on the verge of the Millenium shift. The Archilab Conferences form the 21st Century counterpart of the famous CIAM conferences from the twenties to the fifties of last century. While the mainstream of all designs are still based on the concepts as proposed during the CIAM conferences, the participants of the Archilab conferences were bound together by one main driving force, that of *customization*, while using *computing* in the design process to develop their designs.

ONL [Oosterhuis_Lénárd] from Rotterdam takes a special position in the group of the 12 nonstandard architects *) at the NSA show. Apart from the fact ONL realised larger nonstandard works, ONL also built an installation of interactive architecture: the NSA Muscle. ONL has succeeded to augment the nonstandard paradigm with another level up: the proactivity paradigm, programming the behaviour of architectural constructs in real time. In the work of ONL both nonstandard geometry and proactive behaviour are mapped on the concept of constructing a fully integrated building *body*, while many others limit themselves to building components like roofs and walls, whereas the very foundations, and industrial products like windows, doors and entrances often remain traditional. ONL has shown in their realized works [Waterpavilion, Acoustic Barrier, Cockpit, iWEB] that the building bodies and the components where they are made of can be reinvented from the bottom up, while interacting with the design material from the top down.

In the KEK lecture at Merlin Kas Oosterhuis will discuss the intrinsic relations between the constituting parts. Always based on the principles of parametric design and integral Building Information Modeling **), he shows how the surface model, the wireframe of the structure, the wireframe of the skin, the specification of the detail, the hot-line to CNC fabrication, and the assembly on-site are forming one indivisible network, thus establishing a systemic and verifiable approach to architectural design. Any change anywhere in the system evokes changes both up- and downstream in the project-specific design system. Steel and skin may never be separated and developed autonomously from each other.

Division of components into functional categories [like steel structure and facade structure] and executed by different parties, which is the basis of traditional process of tendering and contracting, and on the principles of mass-production, is counterproductive to the principles of nonstandard architecture, which is based on the priciples of [mass] customisation. From now on we need to think in inclusive Design & Build contracts, where all parties involved including the fabricators, are collaborating in the design, engineering and execution phases on an equal bases respecting each others expertises, to find the adequate built solution both esthetically, technically and financially, which will not be a compromise but in essence an innovation.

*) Asymptote, DECOi, DR-D, Greg Lynn FORM, kol/mac, Kovac, NOX, Objectile, ONL, R&Sie, Servo, UN Studio.

**) ONL received the Autodesk Building Information Model Experience Award in 2008 for their innovative work using Revit software as applied to the CET project. The CET project now features on the opening pop-up when starting Revit 2010 software.