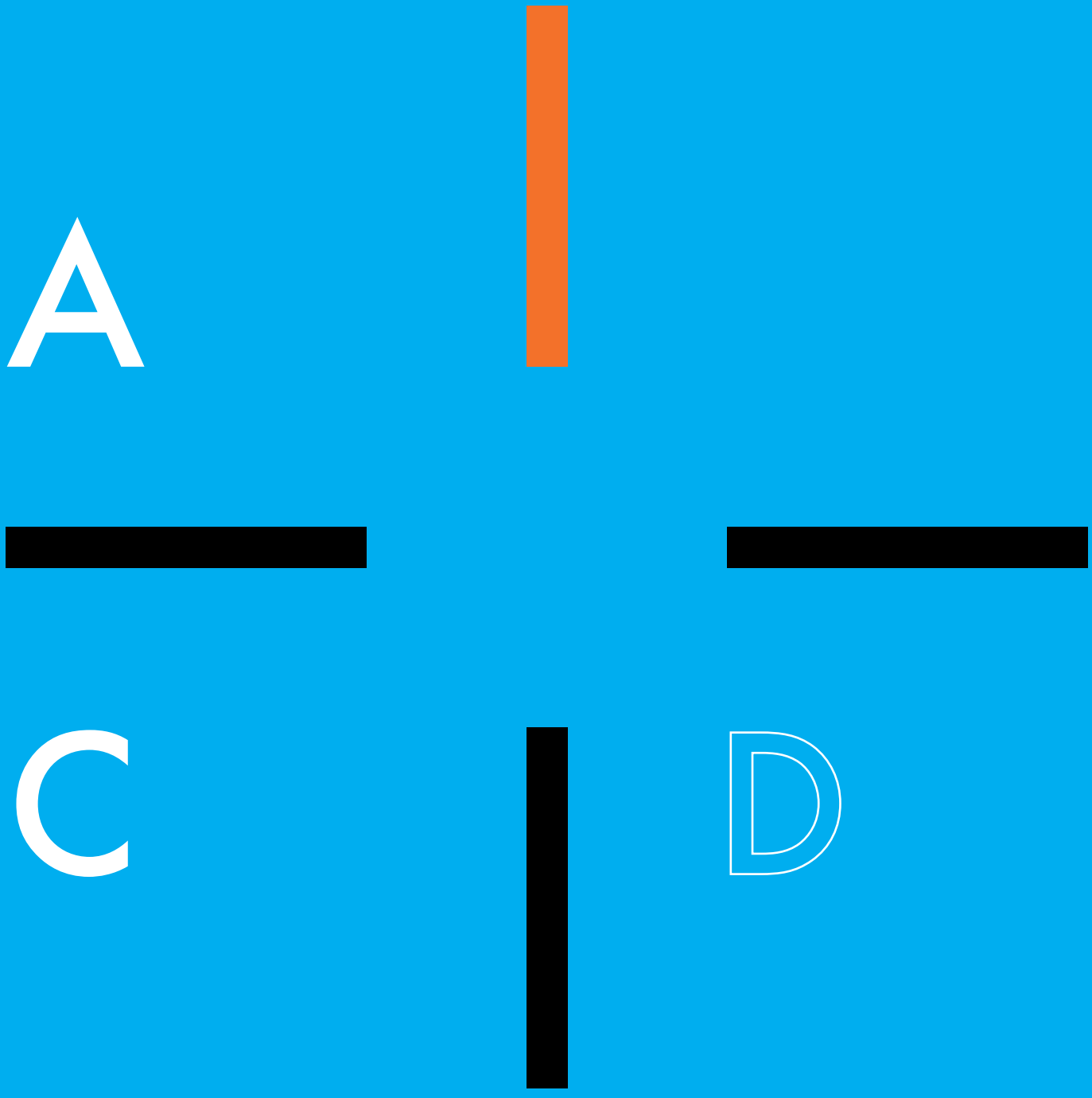
Action Centric Design



SPEKTRUM STU

ACTION CENTRIC DESIGN

ACTION CENTRIC DESIGN

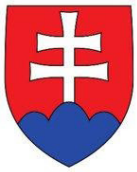
INTERNATIONAL SCIENCE AND ART ONLINE CONFERENCE PAPERS
GALLERY UMELKA, SVU, OCTOBER 1st 2020

Reviewers: Mgr. art. Matej Rudinský, ArtD.,
doc. Mgr. art. Robert Makar, ArtD.

Designed by Erik Rejta

Publisher: Slovak University of Technology in Bratislava
by the SPEKTRUM STU Publishing

ISBN 978-80-227-5072-1



SPEKTRUM
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INTRODUCTION

Action Centric Design International science and art conference, which took place on October 1, 2020 online from the Umelka gallery, with the support of SVU, is the first in a series of professional online conferences dedicated to design in the complex context of all spheres of life. In this case, the theme of the conference is represented by the term "Action Centric" Design, which is understood by each presenting expert independAently, from the point of view, defined by the field in which he works, as well as through their creative, scientific or pedagogical activities. It was the collection of such diverse views on the topic that created a very inspiring and innovative composition of information and ideas on Design, Art and Technology, part of which is contained in this papers.

Martin Baláž
Creator of Virtual Design Conferences Series

DESIGN WITHOUT THE CLAY

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Resumé: Is it possible to modelling free shaped form of car body without the Clay? From sketches, thru the Clay model to Prototype in real scale is the traditional way used by majority of designers from the entire World. 38 years ago I tried the Concept of designing process built on the Geometry Conical curves. I proved all my ideas (in my head) about the Car body transformed into a mathematical model directly and effectively. Have a look at the Result of my work..

Keywords: Design, designing process, Traditional design modelling, Mathematical-geometric modelling, Clay model, Conical curves

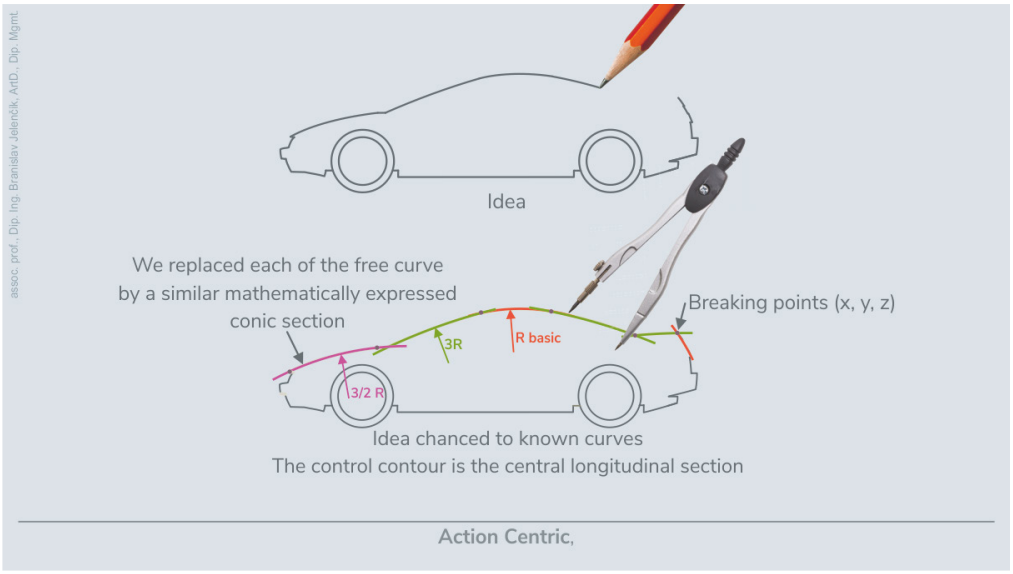
Design without the Clay

Classical, standard approach during the designing of transport machines or another products with „free" shapes:

Sketches for the idea materializing;
- Drawings for former;
- Clay model;
- Capturing a cloud of points from the model and transform them into a detailed shape drawing.

An attempt to rationalize this process in the conditions of the BAZ (Bratislava Automobile Plant) Development department 38 years ago.

Thesis: When the idea of shape is sufficiently accurate, modeling from clay can be replaced by mathematical-geometric modeling (at that time without PC).


assoc. prof., Dip. Ing. Branislav Jelenčík, ArtD., Dip. Mgmt.
Idea
We replaced each of the free curve
by a similar mathematically expressed
conic section
Breaking points (x, y, z)
3R
R basic
3/2 R
Idea chanced to known curves
The control contour is the central longitudinal section
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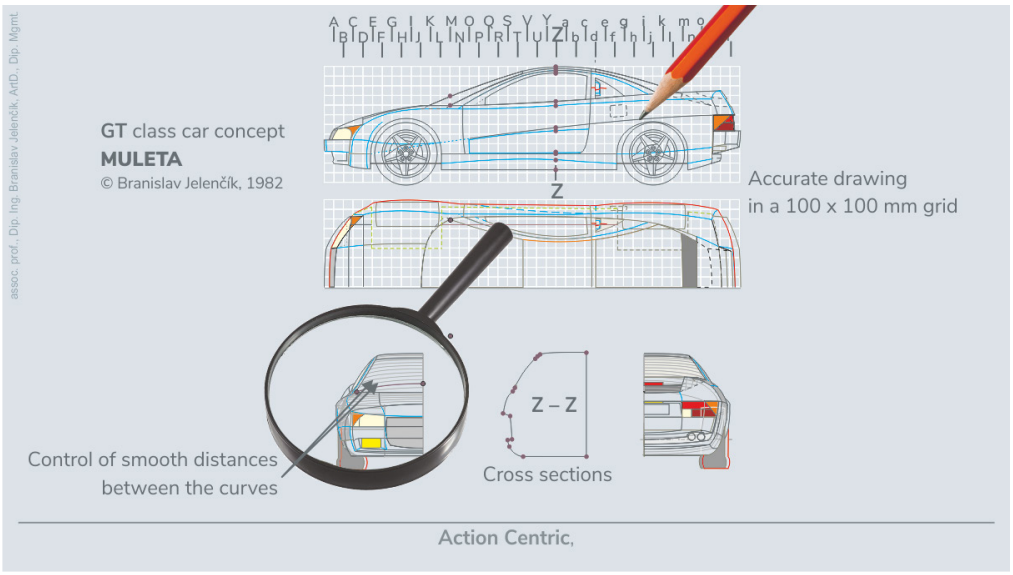
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GT class car concept
MULETA
© Branislav Jelenčík, 1982
Z
Accurate drawing
in a 100 x 100 mm grid
Z – Z
Control of smooth distances
between the curves
Cross sections
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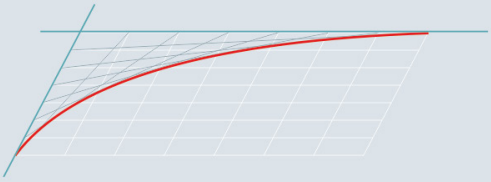
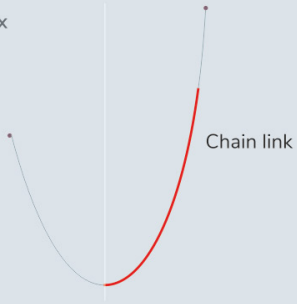
Conic sections

Circle: $x^2 + y^2 = r^2$
Ellipse: $x^2/a^2 + y^2/b^2 = 1$
Hyperbola: $x^2/a^2 - y^2/b^2 = 1$
Parabola: $x^2 = 2py$ or $y^2 = 2px$

or
natural curves





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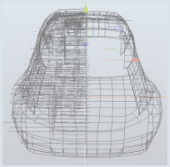
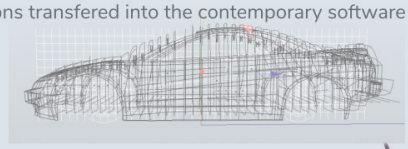
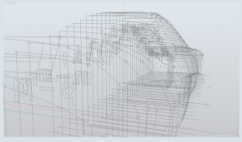
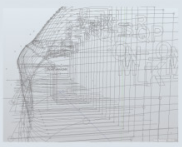
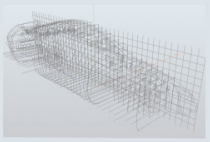
Sections transfered into the contemporary software

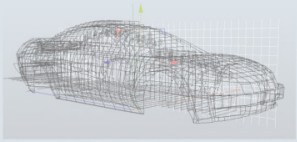


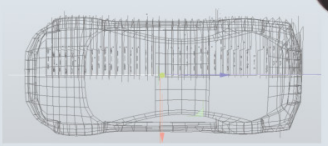












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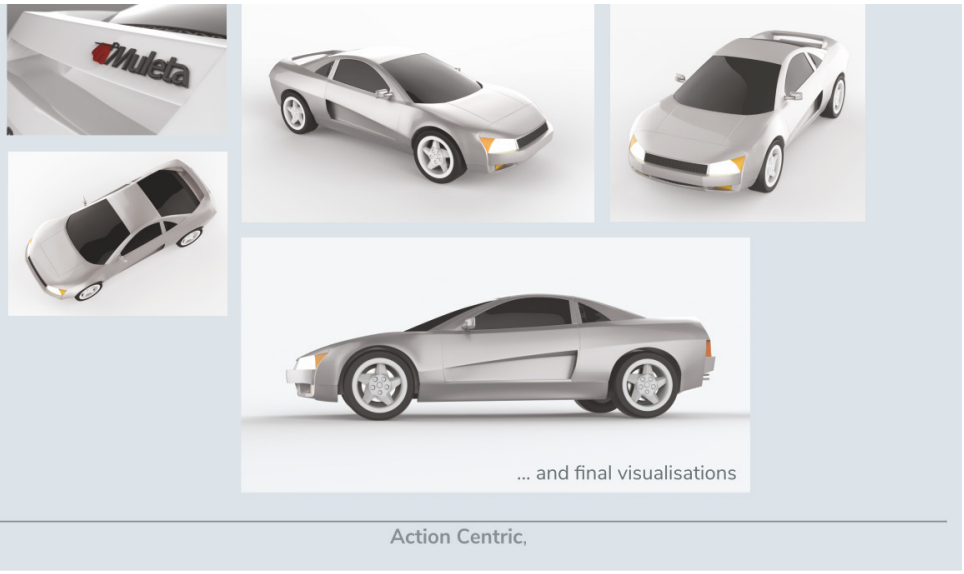
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Muleta
... and final visualisations
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GT class car concept
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3 cars on which we tested and improved the presented designing approach in BAZ to the proposal (1983 to 1990)

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SELECT VIEWS OF GENERATIVE ENGINEERING DESIGN

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Resumé: The paper deals with the introduction of engineering design of surface-based components as a field, which is significantly different from styling designing and also solid modelling. A procedure is presented, through which the component proceeds from styling to the completion of designing activities taking into account the specifics of surface modelling. This topic is supplemented by knowledge of generative engineering design focused on modelling of complex shapes in the process of class-A surfaces creation.

Keywords: CAD, Generative Engineering Design (GED), STRAK

1. General description of GED methodology used during the development of surface-based components

The presented approach is related to generative design known in other fields of applied research. Firstly it occurred in the architecture and artistic fields. But later, its advantages were exploited in other appropriate areas [1]. The procedure described here refers to Generative Engineering Design methodology of shaped components.

Parametric models are numerically controlled deterministic representations of design solutions which result in a new product with similar geometrical values (quantity indicators such as dimensions, weight etc.), but dissimilar in quality (e.g. aesthetic indicators, subjective user requirements, and needs). It means that generative design in new design and innovation offers more than a geometric model. It offers a whole complex of information about a new product which has not only a deterministic nature, but also a heuristic one. Today, parametric modelling is a well established approach. While lower levels of parametrization (i.e. parameters and formulas) are commonly used, higher levels are still underutilized. These higher levels are made of composite geometry, which is required to dynamically adjust to variable inputs. Complex geometry brings more constraints that have to be met to produce a valid result. The parametrization levels, and some practical solutions for its high-level use are well illustrated in [2,3]. Knowledge-Based Engineering describes a wide range of CAD and CAE applications that are used in cooperation with each other, with emphasis on knowledge reusability in repetitive tasks following normal engineering practices [4]. Part of such a cooperation is related to the definition of specific parameters and other kinds of requirements on behalf of automatic design creation. GED is generally a part of such a methodology [5,6,7]. The proposed methodology addresses two of current shortcomings of KBE as identified in [8]. The unique advantage within the shape component design lies in the possibility to define models by the shape and position of surfaces. For example surface of contact is difficult to be set in solid modelling. The presented methodology is based on a proper hierarchy of operations throughout the shaped (i.e. surface-based) component modelling. Such a component is built step by step as is shown in Picture 1. The main advantage lies in the hierarchy of separate files created in CAD software:

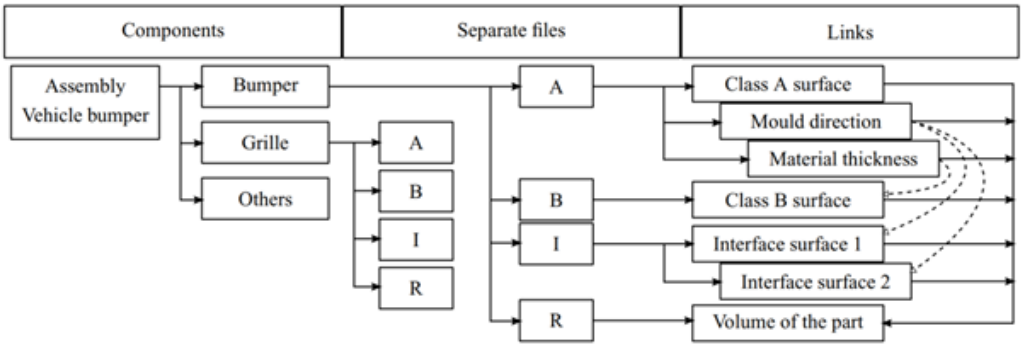
- Class A surface represents input surface. Quality of connections between patches, aesthetics, aerodynamics and passive safety are considered here.

- Class B surface represents derived surface (offset from Asurface + with added technological adjustments). It is important to link all the operations in a way that allows its adaptation to any changes of the class A surface.

- Interface represents connection between parts. For each part pair a separate file is used, referenced by both parts (generally, an interface can be defined between more than two parts). In each interface file, separate geometrical set exits for particular interfaces (e.g.

shape boundary, contact surface, clip definition). Interface creation is the best benefit of automatic modification of assembly during the subsequent stages of product development process. It means that in the case of a class A surface restyling, any affected parts would be changed automatically.

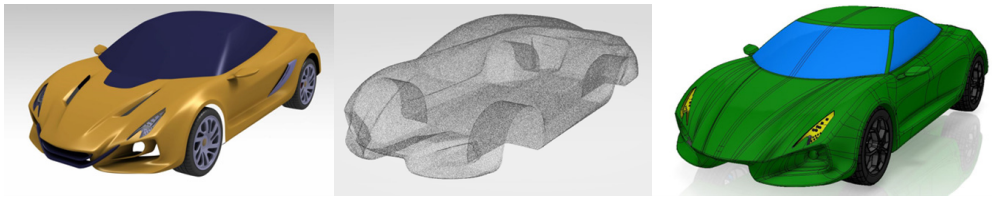
- Result represents the final result, solid or surface for analysis created from hierarchy of input parts and handling interface realization (e.g. shape trim, clip surface instantiation). Functional features (class C surface) represents geometry creation which leads to a design of functional features such as clips, ribs, holes etc.
  A class C surface refers to a functional surface, which originates between parts as interface and after assembling it is constantly covered (not visible from any side). Class C surface is the main construction element of functional features.



Picture 1 General GED scheme and application of GED scheme on vehicle bumper development.

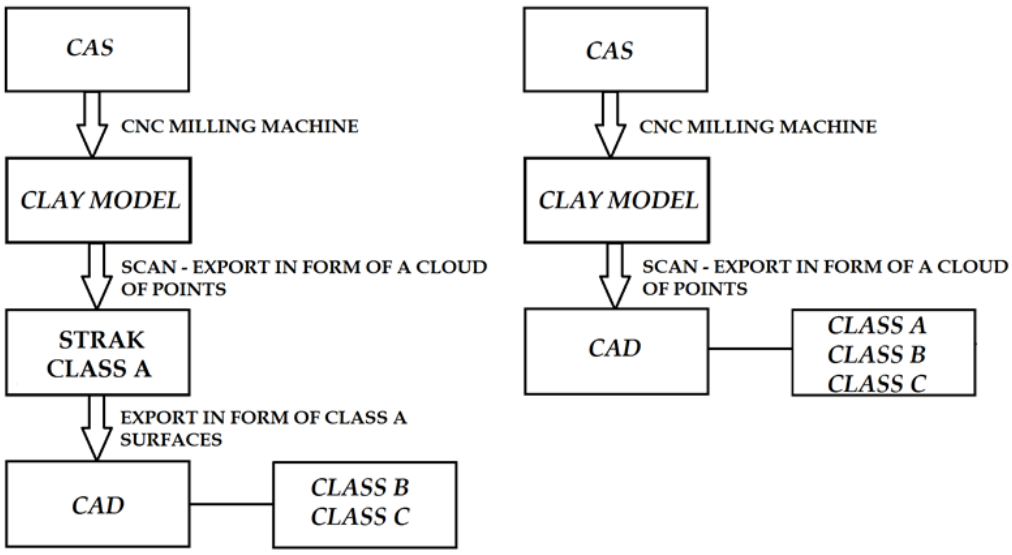
2. STRAK and technical aspects of two modelling approaches

STRAK is known in the automotive industry as a middle stage between the styling creation and the components development. Its goal is to create class A surfaces using a specific mathematical description such as Beziér curve or B-spline. Class A surface is an overall visible surface of vehicle body.



Picture 2 (a) CAS, (b) scanned clay model, (c) class A surface

Firstly, a virtual model of the vehicle is created in CAS software or by using CAS tools based on concept package (Picture 2). Package includes occupant, cargo, power-train, and tires accommodation and might be linked to design sketches. If model meets all the requirements, it is consequently used to build several clay models in original size by using large-scale CNC milling machines. Clay models are only modified in the sense of some details in the eyes of designer. One of the clay models is then chosen as final and 3D scanned. The 3D scan in form of cloud of points further serves as the input for class A surfaces creation. For such a purpose patches are used. Their connection is based on the level of continuity. Afterwards, patches are blended and filleted. The complete class A surface consisting of dozens of patches is then frozen and transformed to CAD. It means an output of STRAK system, such as ICEM Surf, represents the input to CAD system such as CATIA or NX. The described approach is illustrated in Picture 3 (a).



Picture 3 (a) Development approach involving STRAK step, (b) Development approach missing STRAK → GED

In contrast to the described STRAK procedure, there is another approach, which misses the particular STRAK phase. It is shown in Picture 3 (b). System CATIA enables a separate module using ICEM Surf tools. The clay model in form of a Cloud of Points is directly inserted to CAD. The main advantage is the possibility to generate modified components in case of a class A surface change. The reason lies in the input of development phase. There are separate patches using active connections in form of a blend or a fillet, which are active all the time during the detailed design. In case of modification made within the class A surface patches, all the affected components are remodelled automatically, with minimal human intervention [9,10]. Such an advantage is not possible in case of using specific STRAK procedure, since all the surfaces are frozen in one group and inserted to CAD system. Broader comparison of two

different approaches is presented in the following section.

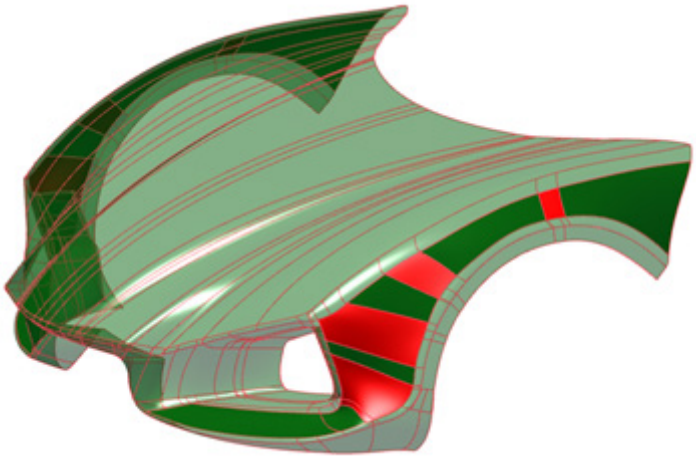
Class A surface creation within CATIA ICEM module is described in [10], similarly to the following points, and is also shown in Picture 4:

- CATIA ICEM module loads styling data in the form of a Cloud of Points. Patches are connected with lower class of continuity, such as G0 or G1, in order to form an intermediate model with sharp connections.

- Patches are divided into sections, higher continuity should be fulfilled within specific section first and later lower level of continuity should be fulfilled between sections.

- Interfacing curves (or boundaries, usually isoparametric curves) are defined on the patches with respect to the shape of the future output model. During any following modification, boundaries are generated automatically.

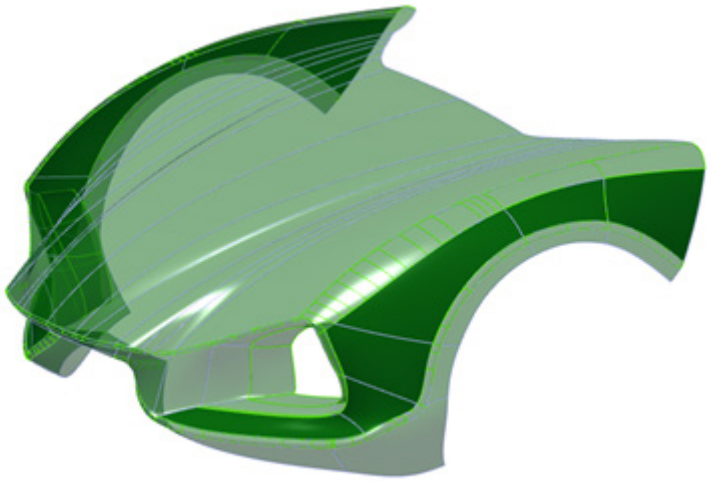
- Connecting surfaces of patches are created with boundaries derived from interfacing curves. Important is a higher class of continuity, such as G2, G3, or higher, to achieve smooth output surfaces.



Picture 4 Creation of patches of one section using CATIA

Difference of previously described procedure against the procedure of ICEM Surf lies in necessity of connecting patches and procedure is as follows, and is also shown in Picture 5:

- ICEM Surf loads styling data in the form of a Cloud of Points.
- Patches are connected with lower class of continuity, such as G0 or G1, to form an intermediate model with sharp connections.
- Patches are divided into sections; higher continuity should be fulfilled within specific section first and later lower level of continuity should be fulfilled between sections.
- Apart from CATIA, here the patches within a section are matched manually to be precise and between sections are created connecting surfaces such as blends or fillets.



Picture 5 Creation of patches of one section using ICEM Surf.

Conclusion

The significant originality of presented work lies in the effort of implementing advanced tools for the field of surface-based components designing, where it is significantly restricted. One of the main restrictions is the qualitative definition of surfaces in CAD rather than quantitative. Therefore, standard knowledge-based engineering is not applicable here and programmable design is only partly useful. All this was taken into consideration when a specific generative engineering design methodology was proposed with focus on surface-based components. Another important task for author was to promote engineering designers working with complex surfaces to be comparably advanced in engineering work, in contrast with creative artistic designers working with CAS or clay model. The biggest goal in this field is to get designing to a higher level by making all the future components to be of complex-shape. It is the most natural way of designing and nature has in its nature to save material, minimize resources and have effective mechanical properties.

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DESIGN STRATEGY

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Keywords: Design, function, form, strategy, design, user, understanding, functionality, security

1. Form follows function

Design strategy

"Life manifests itself as, that form always follows function"
Louis Sullivan

It is a law that respects all organic and inorganic, all human and superhuman... The credo was adopted by the greatest design school Bauhaus, which most significantly influenced the development of design in the practice of dual arts and crafts, which were taken care of in parallel by "masters of form" and "masters of crafts". (Form + function).

Picture 1 – Form follows function

2. The value of design

The value of a design
is the value of a function and a form
= content functionality value + form intelligibility value

Design function
is an arrangement of interactive elements whose task is to communicate with the user - functionality that is confirmed by the user.

Form of design
it depends on current technologies, goals and social context.

DESIGN = FUNCTION + FORM

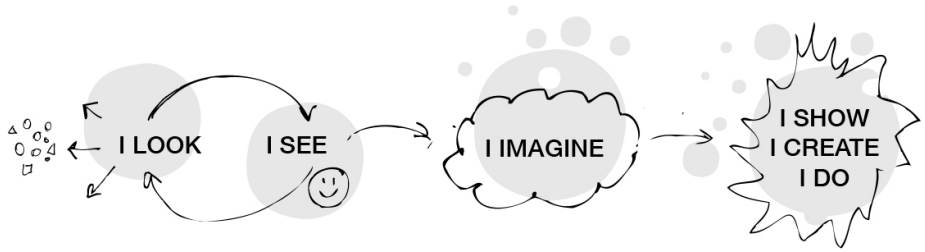
3. Design context

DESIGN
Is standing on a wider context
– social & psychological,
– technological & material,
– space & time
conditions, coherence and aspects,
which we call globally for example:
consciousness, requirement, environment, surroundings, circumstances, society...
Also when assessing technical processes, artifacts and their impacts, we must take into account different value structures or sets of criteria in specific contexts and systems.

4. Design processes

DESIGN MAKING
Is standing on the ability to be creative

The process is simple:
Vision – perception – analysis
Understanding – defining key instances
Communication – expression – design proposal



Picture 2 – Ability to be creative

Design development processes

VISION
Brief
Analysis
Research

UNDERSTANDING
Specification
Problem solving
Presentation

COMMUNICATION
Design production
Development
Testing
Feedback
Implementation
Evaluation and conclusion
Redesign

Content aspect of design

VISION
General material, social and other conditions - environment, environment, space & time contexts

UNDERSTANDING
Range and complexity
Quality and quantity
Implementation and fulfillment
Comparison
Movement and development

COMMUNICATION
Benefit
Security
Clarity
Quality and trouble-free
Efficiency and simplicity

5. Form and understanding

UNDERSTANDING

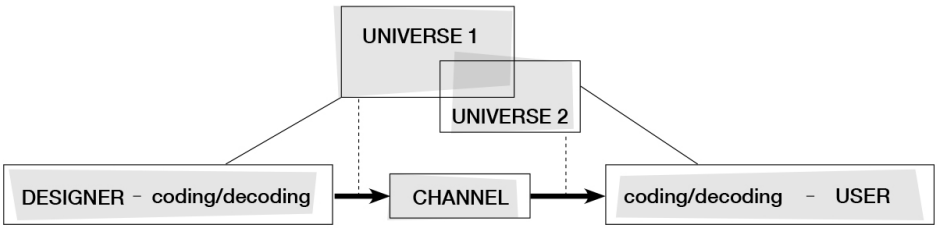
The first prerequisite for establishing communication is understanding.
If the design were incomprehensible, it would not be possible to establish communication with the user, respectively, communication would be functional only by chance.

The form of the design must always be based on the conditions of utility communication between the system of interactive elements and the user.

In communication with design, the social function of design is also realized, which presupposes:

a) a set of at least two communicators, an object and a subject,
b) the reality to which the media channels, design and user relate.

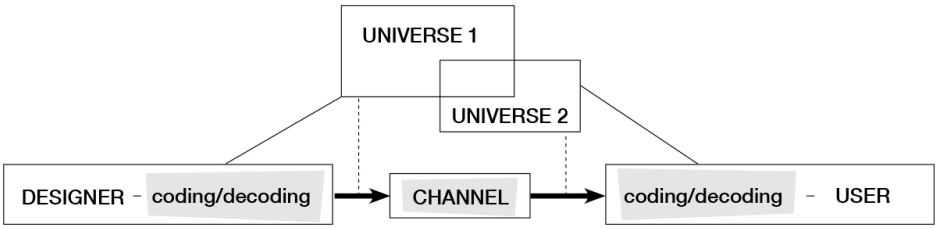
In this case, utility communication is performed according to the model:



Picture 3 – Understanding of design: the social function of design

Bases for clarity of form

Communication = C coding method + D decoding method + channel between the designer and the user

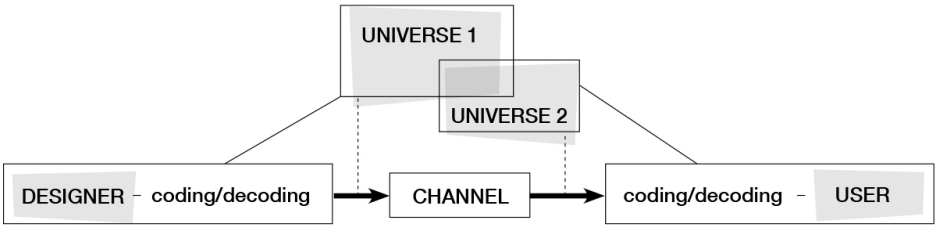


Picture 4 – Understanding of design: coding method

This model shows that the communication between the communicator I - designer and the communicator II - user, requires a E encoding method and a D decoding method.
+ subjectivity (S1 and S2)
Communication includes S1 and S2 - subjective worlds of communicant I (designer) and communicant II (user).
+ universe (U1 and U2)
Communication also contains the universe - the area of both communications to which the communication applies. In the model, this area is labeled U1 and U2.

Understanding the form of design

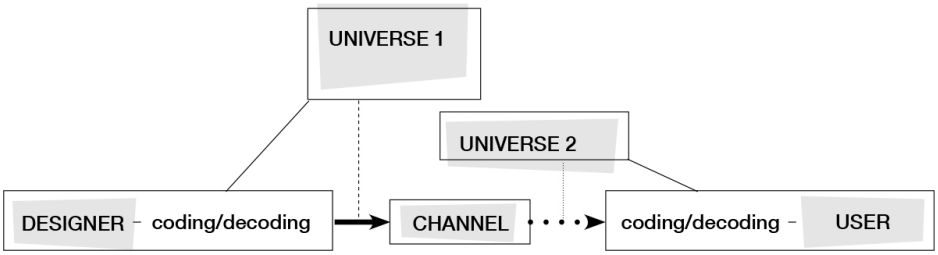
The regions of the universe are not identical, but coincide with each other - they intersect. The greater their penetration, the more understandable the design is for the user.



Picture 5 – Understanding of design: communication

Misunderstanding of the form of design

In case, that the intersection of Universe 1 and Universe 2 would be an empty class, (which we call 0), communication would not occur at all. The design would communicate in a way that the meaning would be incomprehensible to the user.



Picture 6 – Understanding of design: misunderstanding and misunderstanding

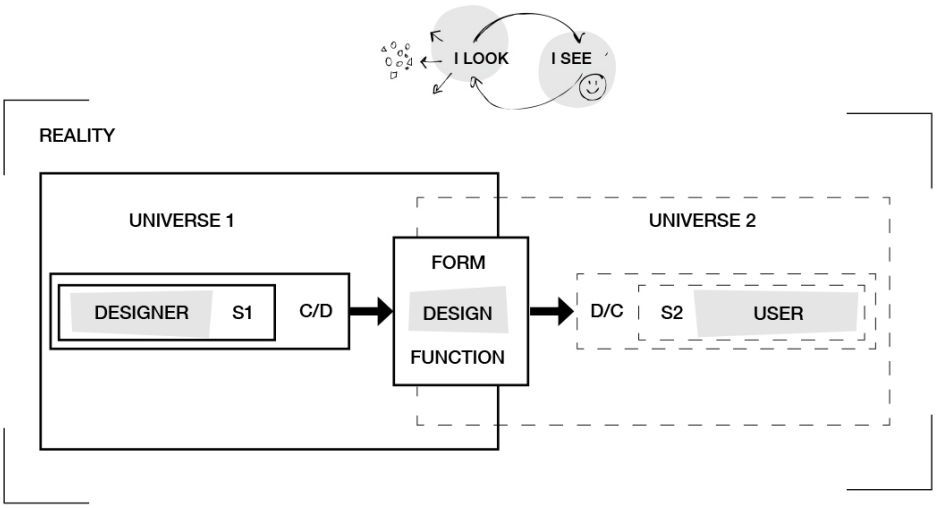
The conditions for successful useful communication, which we refer to as understanding, can be expressed in the form of two postulates:

1 $\forall u1\ (u1 \sum u1) = \forall u2\ (u2 \sum u2)$
2 $\forall u1\ (u1 \sum u1) \times \forall u2\ (u2 \sum u2) \neq 0$

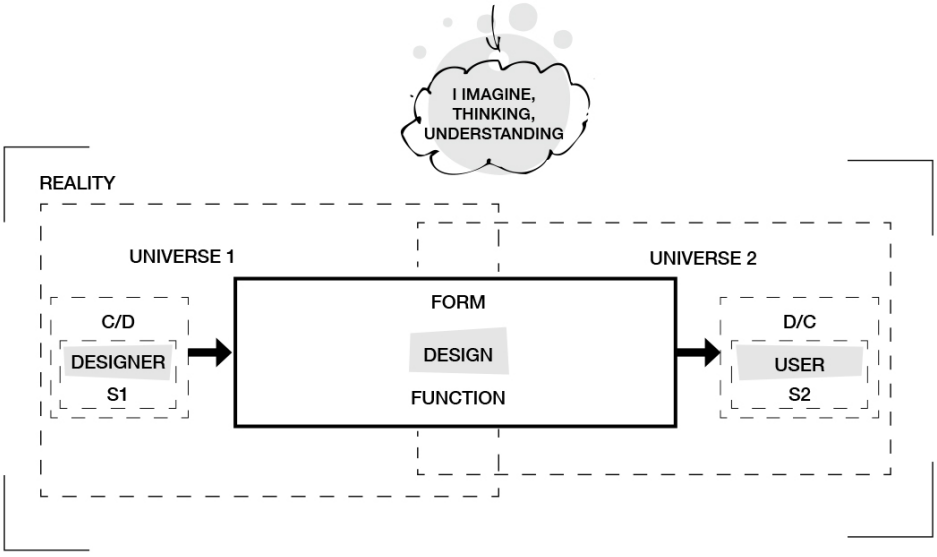
The first postulate states that mutual communication between communicants occurs when a certain $u1$ from the university U1 can be identically assigned $u2$ from the universe U2 and when both communicators use the same communication term to denote them. The second postulate admits partial differences. However, their rate must not take the value of an empty class. The validity of both postulates is relative. It absolutely applies to the interpretation of professional or special (the specifics of which require absolute fulfillment) useful communication.

6. Scheme of the solution process

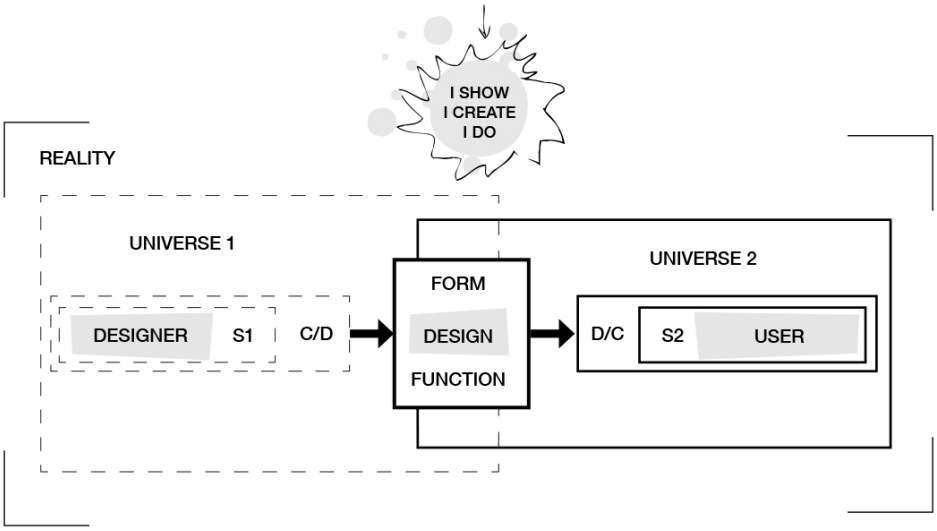
Scheme of solution and evaluation of function and form of design



Picture 7 – Design: perception



Picture 8 – Design: thinking

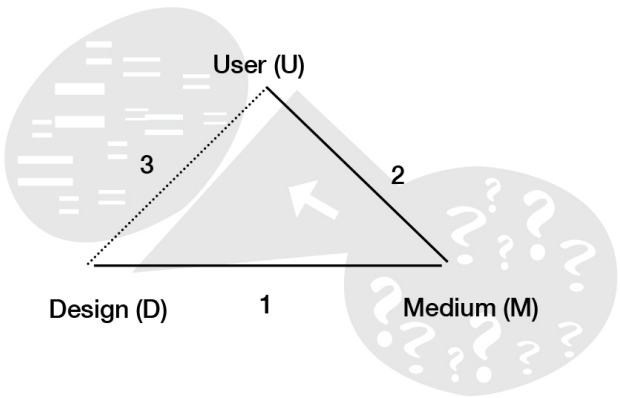


Picture 9 – Design: expression

7. Function and meaning

FUNCTION - Value of the meaning of the function

Functionality is the adaptation of design features to the needs of users.
A function is a specific requirement that must result in utility value.
When examining the values of design functions, it is primarily a matter of focusing on the relationships of the communicating user (subject) with the design (object), through one or more media in a specific way.



Picture 10 – Functionality makes experiences

User (U) = an entity that has a specific design (object) requirement that must result in utility value.
Design (D) = object is a functional model created with the aim of utility effect.
Medium (M) = one or more communication channels (text, image, sound -) - a unit of one or more communication channels that the user can record with the senses, through which he can capture the communicating meaning.

1 = relationship, designation function
2 = relationship, especially psychological aspects
3 = semantic relationship

The solid lines in the reference triangle express real relations.
This means that the relationship between the user and the design - relationship 3 (dashed line) is only input. It can only be done using equations 1 and 2.
This means that if the user (U) has no idea, concept, or any other attitude to design (D) and if he does not know the media used (M), then the relationship between U and D - relation 3 for U does not exist. Therefore, no interaction can occur.

Functionality is a range of functions - activities, which can be performed using a specific type and design equipment, other additional elements and functions.
The functionality "F" of the design is the value of the function of one or more media - communication channels nMf for the design argument (D), its way of interaction - communication (M) with the user (U) F = nMf (D, M, U).

8. Safety of use and impact of design on the environment

Safety is one of the most important aspects in design and evaluation.
Means of protection or prevention of possible risks are usually the product of better scientific or technical knowledge, new, interdisciplinary knowledge and other technical solutions. We can examine security in terms of design, user, data, and environment security; and the mental security of the information received.

The philosophy of user friendliness also follows other effects that arise when using the design - the effects of the design on the user and the environment.
The general property of environmental impact is determined by a set of parameters in the direct or indirect use of the design. The degree of environmental responsibility, reliability and veracity of the received information is monitored.

PROTECTION OF OUR PSYCHICAL OWNERSHIP AGAINST ANTAMING UNSOLVENED INFORMATION.

The value of the importance of environmental impact is rising with the increasing deviation of the moral value of design against the moral values of society!

9. Design evaluation

„Creativity has the power to transform human behaviour“

Design evaluation inspired and created by HumanKind - Rating Scale 7+

1. Destructive design solution
2. Design solution without an idea
3. An invisible and uninteresting design solution
4. Incomprehensible design solution
5. Understandable purpose of the design
6. Design with an intelligent idea
7. Design with an inspiring idea, beautifully crafted (HumanKind)
8. Design solutions change the way people think and feel
9. Design solutions change the way people live
10. Design solutions change the world

Picture 11 – HumanKind Scale

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ACTION CENTRIC INDEPENDENT ARTIC RESEARCH - OPEN SPHERE DESIGN STRATEGY

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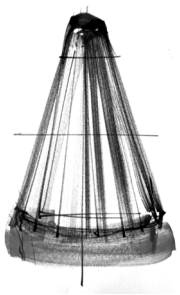
Resumé: The fusion of action parts of independent design research with studio creation, gained experience from projects and actions led me to their more fundamental integration into the design of a new model of design philosophy and strategy - Star Status Open Sphere, which allows me to create, research and run a studio focused on topics of inspiring lifestyle, inclusive and exclusive design, inspiring mobility, international inspiration from partner universities and authentic motivation, as well as a synergistic strategy of cooperation with designers, architects and practice. Action Centric technologies of independent artistic research using the Star Status philosophy and the Open Sphere strategy accelerate the composition of artistic, technical and contextual elements of the proposed design.

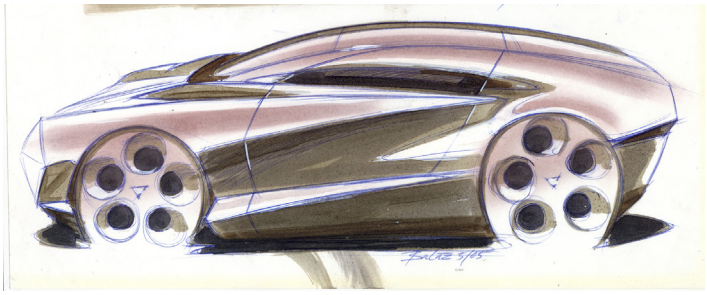
Keywords: action, independents, art, design, strategy, sketching, technology, synergy

1. Design Thinking – Action Centric Fusion

Acquiring and mastering of design drawing as the most credible technique of an autonomous artistic exploration, drawing as a way of thinking in the most natural form in the designing process – from outlining the problem to searching for ideas and developing the form of an understandable information unit, a multimedia presentation, an artistic expressive drawing of the final design idea by using classic and digital technology are on of important parts of **Action Centric Research by Design. [1]**

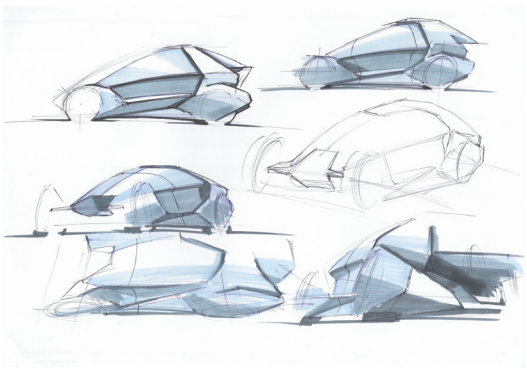


Picture 1 Erik Rejta, Authentic motivation, Natural sketching

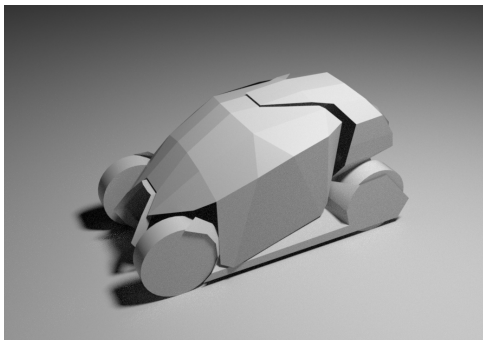


Picture 2 Martin Baláž, Redefinition sportscar, Natural sketching

Explanation of philosophy and theory of designer drawing and designer thinking in drawing, types and techniques of designer drawings, demonstration of designer drawing, sketching of ideas and designer's concepts based on an inspiration resource, sketching of analysis and form exploration in the designing process, experimenting with sketches,generating solutions, development of designs in drawing and author's expressive communication sketch suitable for feedback are the basic parts of Design Sketching Technology [1] development.

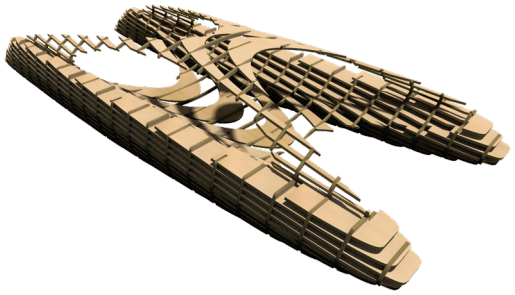


Picture 3 Daniel Chromek, Kaipan, Natural sketching



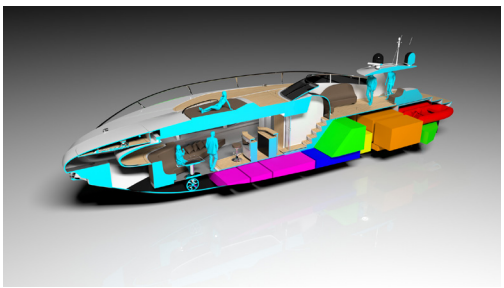
Picture 4 Daniel Chromek, Kaipan, Visual design language

Ability of designers based on their individuality to cope intuitively with the development of a new visual design language, understanding the own role in the strategy of designing, emotions in design, decoding aesthetic, construction and philosophical impulses of the inspiration resources, searching for ideas, visions and defining the concept, experimenting with their transformation into free creative designer outputs without technical normatives are on of important parts of **Design Thinking** and **Visual Design Language [1]** development.



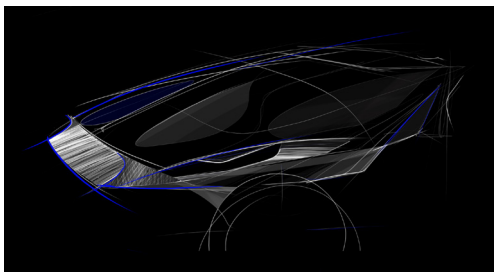
Picture 5 Erik Rejta, International inspiration – Yacht, Visual design language
Picture 6 Erik Rejta, International inspiration – Yacht

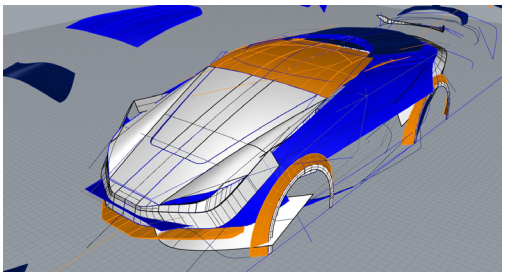
Explanation of philosophy and issues of visual design language, examples and demonstrations, intuitive and courageous searching and documenting the inspiration resources, vision and concept based on inspiration resource, sketching, analysing and form examination, experimenting in the design process, generating solutions, development of design in drawing and 3D models, author's expressive vision of a new visual design language are the basic parts of **Action Centric Design**.



Picture 7 Daniel Chromek, Dolce Vita-Dunaj More, Yacht, Synergic strategy
Picture 8 Daniel Chromek, Dolce Vita-Dunaj More, Yacht

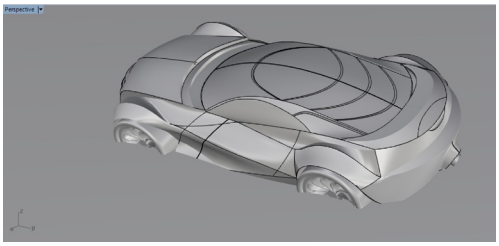
Acquiring and mastering the common strategy in designing process between the designer and constructor, defining the balance between the individualism of the designer's aim and the formalism of the construction solution, mastering the philosophy and method of design strategy, synthesis of designer drawing and 3D environment in the design process, dimension, construction and shape analysis, visualization and presentation of projects are the basic layers of **Synergic Design Strategy**, in research in interdisciplinary cooperation and in pedagogy in the creation of an interfaculty module of design and construction subjects. **[2]**





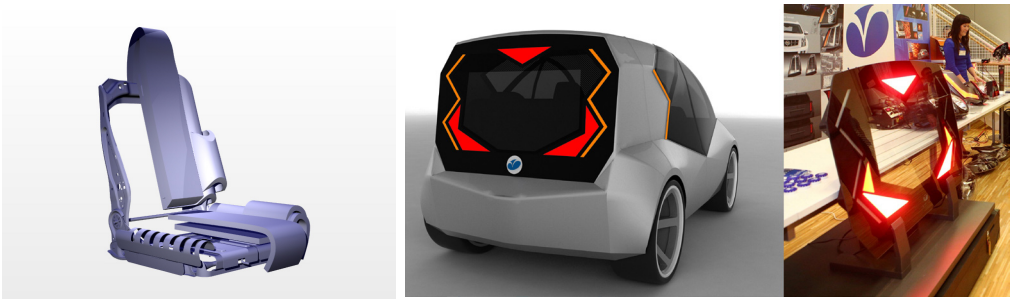
Picture 9 Erik Rejta, Inspiring mobility, Independent design research, Digital sketching
Picture 10 Erik Rejta, Inspiring mobility, Independent design research, 3D synergy

Action centric communication of design thinking can take different forms and styles on a common classical basis and is still evolving. This is best reflected in my exhibition "10 years of design drawing at the FA - Salon of Inclusive Art Research", which I organized together with colleagues and students at the Faculty of Architecture. It has included all the action centric components of design in various positions of thought and exclusive communication of ideas in various fields of design and collaborative disciplines, and new forms worthy of research are constantly being added. Action centric independent research is not only dynamic emotion action for observers, but Logic Thinking for designers, real mental action accelerating visual elements.



Picture 11 Martin Baláž, Fenix, Digital sketching, Independent design research
Picture 12 Martin Baláž, Matter, Motion Biosphere, Independent design research

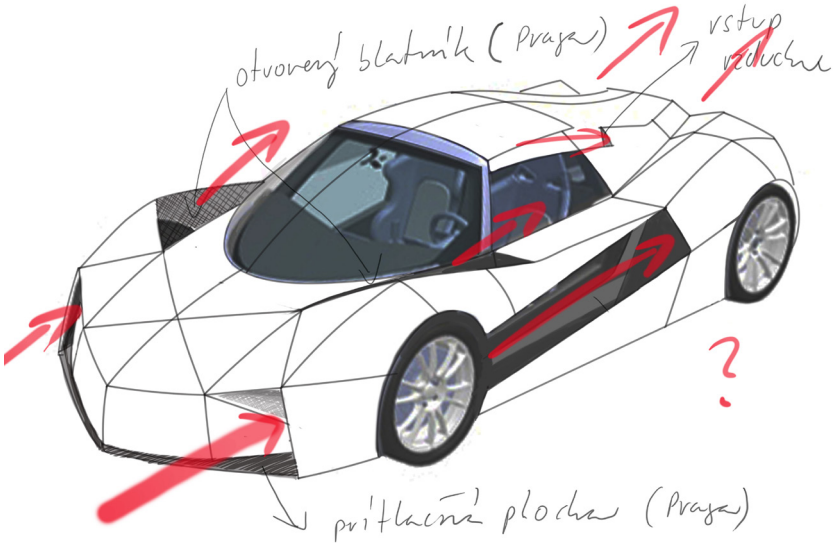
During my time at the Faculty of Architecture and Design, I see a huge shift. I started with analog design drawing, gradually added digital drawing and a summer school of design drawing with elements of free art style. Along with design drawing, I developed the subject of Visual Design Language, one of the approaches to research in design. Later, I continued to develop their research and communication potential in a more comprehensive way in the design process. Special events that I connected with design drawing, such as Sketch Battle, Design Sketching Mission in establishing contacts at partner foreign schools, also contributed to the development. The problem I see today is that a lot of space is given to verbal communication, without the superstructure of thinking in drawing. It becomes more of an attractive experience for idle observers than a tool of self-expression. Currently, there is another challenge, online communication in the design process.

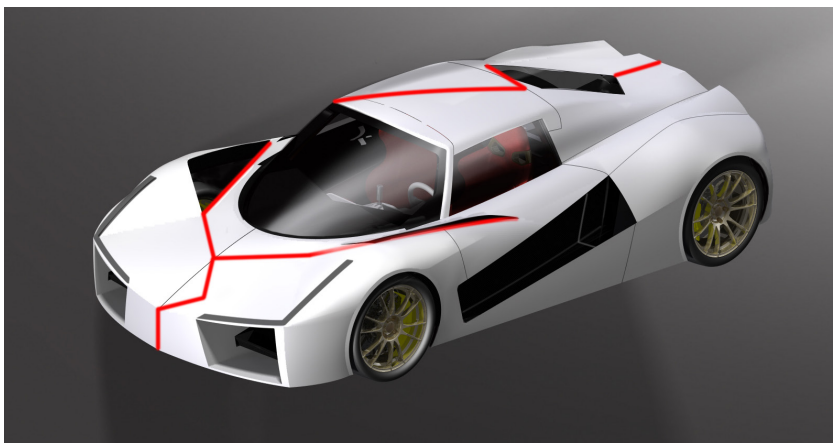


Picture 13 Martin Baláž, Júlia Francová, Uni Seat, Independent synergyc research
Picture 14 Martin Baláž, Varroc City Comuter Lighting, Independent synergyc research

2. Independent Research, Independent Synergic Research, Independent Design, Independent Design/Engineering and Authentic Personal Style.

Expressive forms of expressing creativity in the form of artistic performance with overlaps from design drawing through visual language to street art opened the way for me to research in the field of independent artistic research. Thanks to projects that I have been or can be a part of in my work and the work of my students, I can always find new connections between Independent artistic research, authentic personal style, independent artistic synergyc research and independent designer and independent engineer. During the study of transport design, I perceived the identity of the brand, the language of shapes, the importance of imagination in the design process. As a designer, I worked on the lighting technology of an electric car.



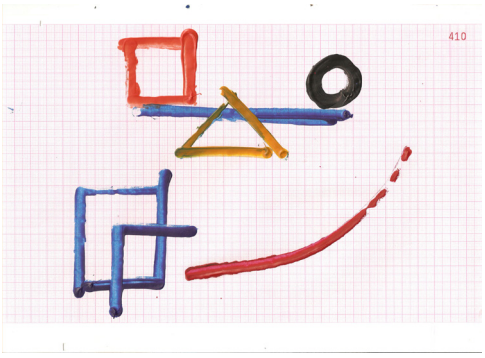


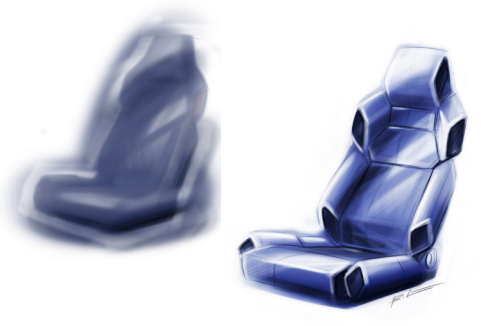
Picture 15 Martin Baláž, Norbert Káčer, Sport car, Independent synergyc research
Picture 16 Martin Baláž, Norbert Káčer, Sport car, Independent synergyc research

With fellow designers, I participated in solutions for people with special needs, we tuned the communication between the designer / designer for energy-efficient vehicles. In the studio, we addressed the topic of design iconicity. I had the opportunity to look at the problem of transport from the point of view of architects and urban planners, we tried to work in a 1: 1 space. Lately I've been confronted with shipping and I'm currently trying to reinterpret an emotional relationship with a car. The angle of my view is constantly changing. The cooperation of the designer and constructor and their joint work on visions, for example in the automotive sector as clean energy sources, their efficient use, minimization of energy losses, shape optimization and the use of aerodynamic elements for smooth air flow are proof of synergistic action centric design. It is very important for the designers and the engineers to know the interface in which they work together. **[3]**

3. Imagination levels

I see the benefit of the fusion of independent research and synergetic strategy in stabilizing the design process, in project cooperation within the university environment and in subsequent cooperation with other universities. I consider the philosophy of democratic leadership and individual activity of the "action-centric" approach to design to be a positive contribution to design itself. The atmosphere of the team/studio expresses the quality of the group's environment, its mood and emotionality. Another factor is the position of the leader. The functioning of an open team/studio is based primarily on a democratic approach to leadership **[2]**, with a leadership style that takes into account the feelings and opinions of team/studio members who are able to work independently. In this way, there can naturally be a transfer of an idea to a design idea at different levels of perception, from basic through trend to avant-garde type of design.



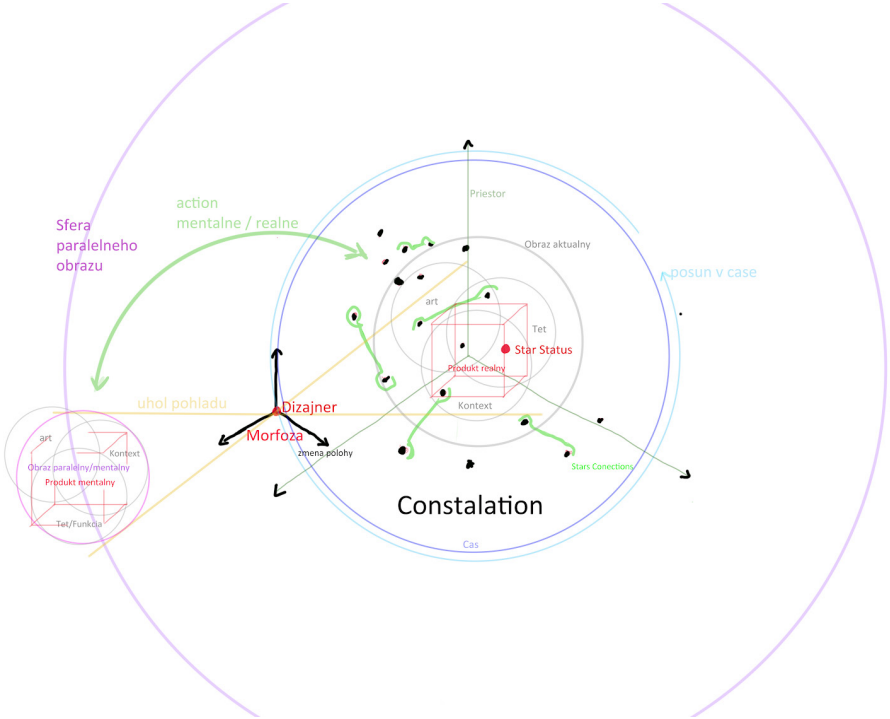


Picture 17 Erik Rejta, Independent research imagination
Picture 18 Martin Baláž, Uni seat, Independent research imagination

4. Open Sphere Design Strategy

Real Action Centric Design Thinking, Independent artistic research in my theory based on using three elements of the design process.

- Star Status Constellation PhIlosophy
- **Open Sphere Design Strategy**
- Authentic Design Essence – avant garde art of design layers



Picture 19 Martin Baláž, Open Sphere strategy composition

The best definition of Open Sphere Design Strategy is simple Picture composition representing movement of designer/observer status around the Open sphere orbit line in real space and time and permanent change of the designer view/focus on the active Star Status constellation, representing society context with connections between these stars. Designer during morphing point in the mind morph real composition into new composition imagination as a mental Picture of design and with constantly integration of connections develop real picture of new design and design result is a real action and interdisciplinary fusion in final design.

This Authentic design have some art of essence design layers:

- Philosophy
- Context
- Surreal imagination
- Synergic imagination
- Real imagination/experiment
- Final Synergic strategy composition/construction

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OPEN SPHERE DESIGN

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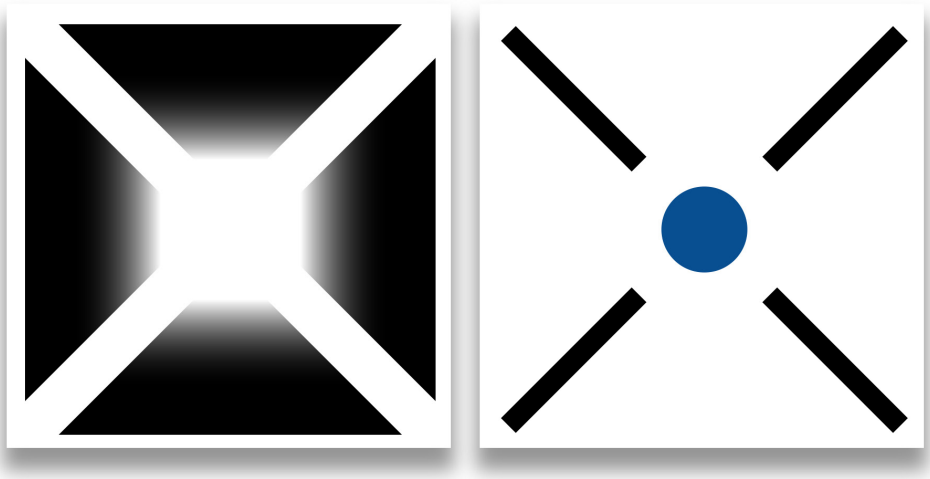
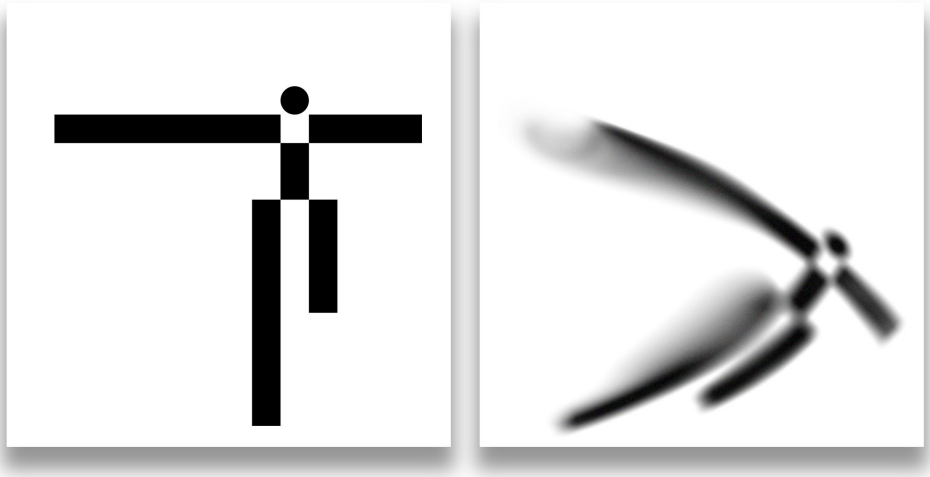
Resumé: Open Sphere strategy is closely connected with other two elements of our design process - Star Status Constellation Philosophy and Authentic Design Essence. It is very important to confirm this complex theory in the design process. We (as pedagogue and his student) aplicate this process in design studio projects. But first it was necessary for us to confirm a common understanding of this strategy. In this case we create pedagogue-student authentication in innovative art composition.

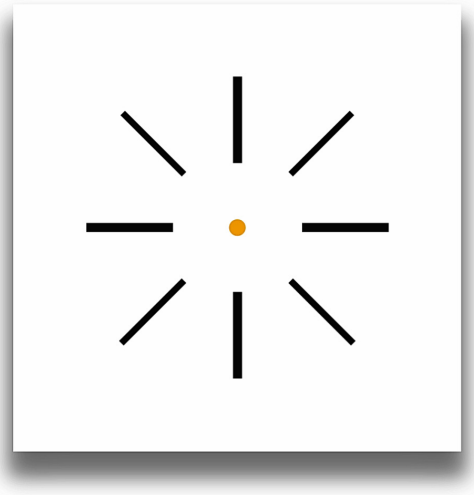
Keywords: star, status, phylisophy, open, sphere, authentic, design



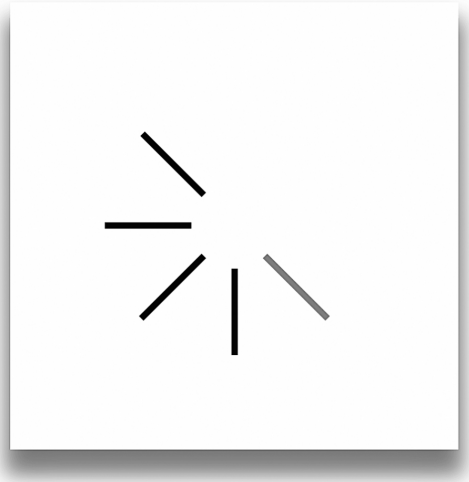
Picture 1: Spacetime as a Designer's context



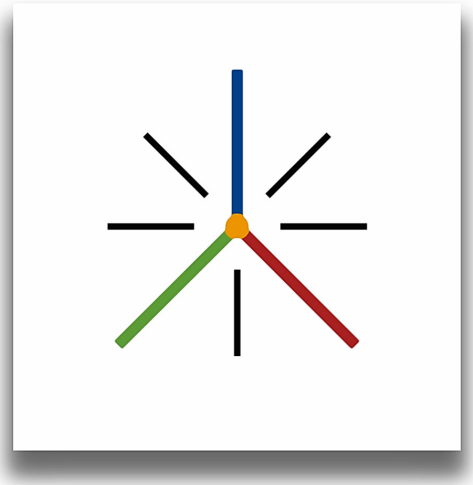
Picture 2: Morphing role of a Designer



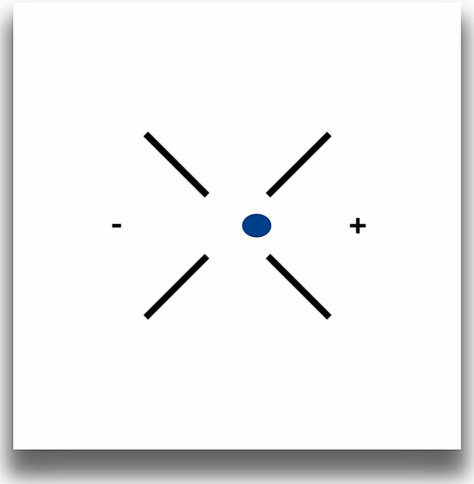
STAR STATUS



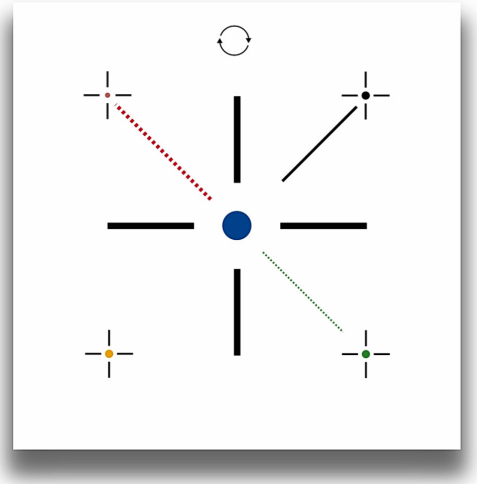
TIME



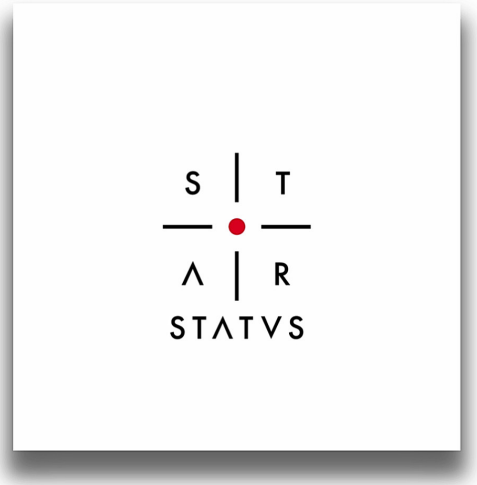
SPACE



VISION



PARALLEL IDEAS



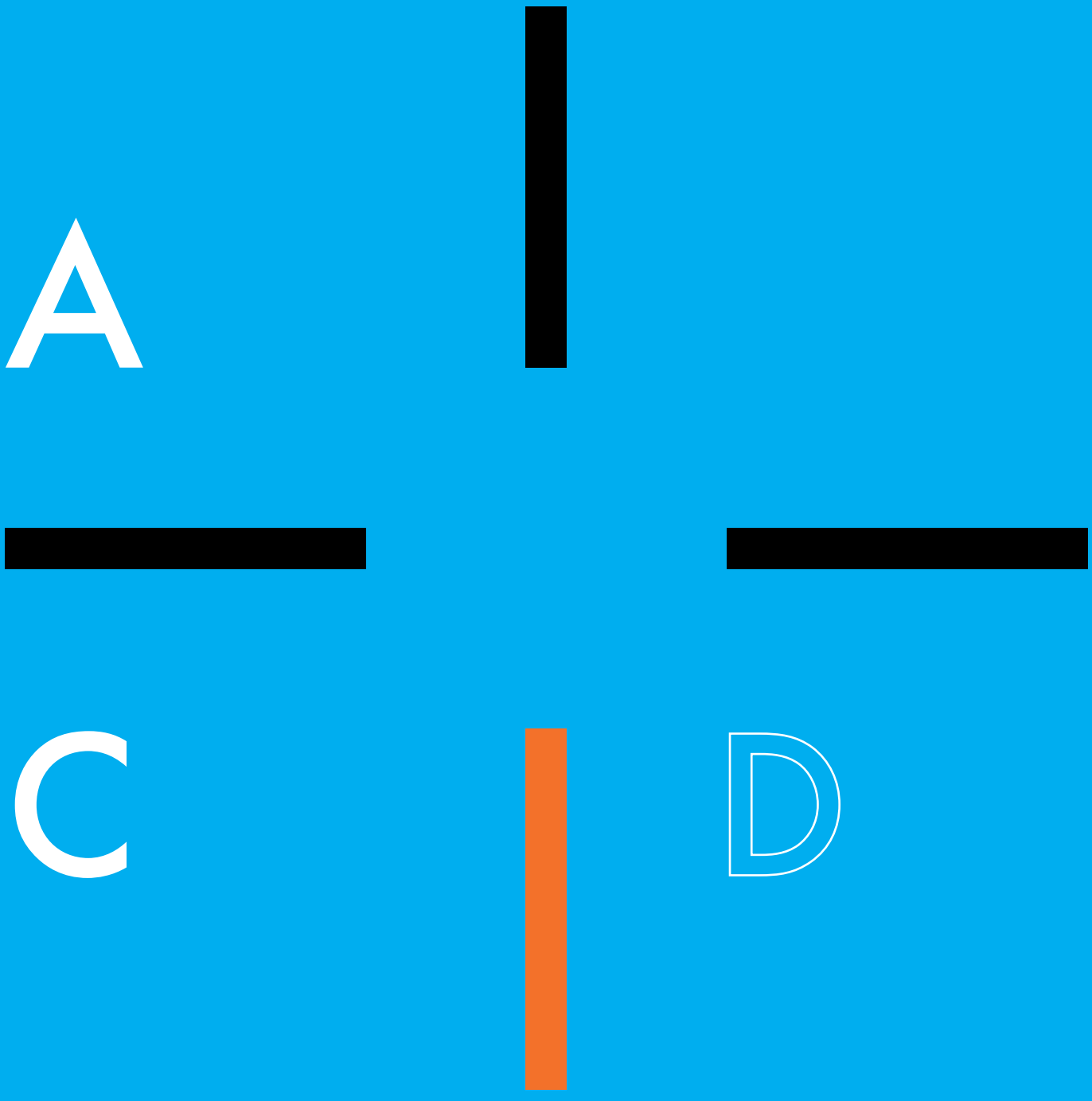
Mgr. art. Martin Baláž, ArtD.
Bc. Erik Rejta

2020

Summary

Action centric design International science and art online conference papers In the first section of lectures, experts focus primarily on the action centric method of construction, especially in the automotive sector, but also in other types of transport. At the same time, their view is a cross-section of the development of methods that are used in the field of construction, both in practice and in research. Also, how these methods are linked in the design process with design. In the second part, experts focus more on design action centric design connected not only with construction, but also art and communication. They point to the importance of independent artistic research and its synergistic connection with construction. The conclusion is a presentation dedicated to the strategy of open design thinking.

Picture 1 Gallery Umelka „online conference studio", from left Erik Rejta, Martin Baláž, Branislav Jelenčík



ISBN 978-80-227-5072-1