A contribution for <http://www.dorfwiki.org/wiki.cgi?VideoBridge/GrundtvigWorkshop>

# The “Video-Bridge” project – a sophisticated frame for rural controlling and strategic planning

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**“The Video-Bridge project aims to realize permanently available cheap group communication possibilities, preferably live and in both directions with high quality video/audio-streams via the internet Wherever broadband connections are available, we want to use these connections to transmit and share between Places of Access and Learning mainly in the peripheries, interesting events, speeches, conferences and workshops. It is also essential to turn them into open learning materials for later use, and try to emphasize free licenses. The term "video-bridge" instead of "video-conferencing" signifies that there is something happening at local scale, which we are simply enhancing (or enabling) by a "bridge"(while a videoconference is primarily an event in virtual space). That could be a lecture at a university or at a conference, or a special meeting on a special subject, or simply a come-together of a local group. At the other end of the line there are complementary activities. Thus a video-bridge is simply the enhancement of the possibilities of a local (mostly educational) place by tying in happenings from elsewhere or sharing local events with those elsewhere.” (**[**http://www.dorfwiki.org/wiki.cgi?VideoBridge/Beschreibung**](http://www.dorfwiki.org/wiki.cgi?VideoBridge/Beschreibung)**) In this article a special (quite universal) learning content should be described in order to show a new logic for rural communities to explore their real chances and the risks of arbitrary human ideas. This new approach can be transferred to the local players through video-bridges effectively. With the help of the video-bridge, decision makers (and their staff being responsible for preparation of decisions) will be able to support their intuitive (therefore not proven but mostly enormous sensitive = best practice long since) capabilities with facts and analyses of these.**

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## Introduction

The core problem of a video-bridge project is how to provide relevant content in an economically sustainable way? In this question two sub-problems can be identified: the definition of relevant content and sustainability (cf. the business model). In one of the extreme situations the motivation for content transferring is a curiosity. It should be accepted at once: this type of “business frame” may not always be seen as sustainable, because processes (producing value added effects for covering costs of knowledge acquisition and transfer) cannot be executed automatically. Therefore a real business model should be drawn on conscious decision making instead of pure interests. A decision might mean a well-prepared business plan including strategic and operative layers. The strategic layer defines the possible courses and target. The operative layer shows, how precisely it can be achieved.

To unravel relevant content, a deeper analysis of the potential standard situations is needed:

## Knowledge management

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ID** | **SID** | **OID** | **IDE** | **WK** | **ISU** | **Description (incl. TASKS for the video-bridge project)** |
| 1 | Y | Y | Y | Y | Y | **The necessity (OID) of knowledge transfer is consciously (IDE) recognized (SID), the necessary information is given (WK, ISU). TASKS: structuring facts, building online databases (c.f. OLAP) or rule systems (c.f. expert systems), teaching SQL-skills and combinatorics, minimizing human resources. Through video-bridging these skills can be educated (Step1: “Do not give a man a fish. Teach him how to fish instead.”)** |
| 2 | Y | Y | Y | Y | N | Supply is not given (c.f. due to security regulations or in case of an insufficient business model) TASKS: Searching for adequate business models (e.g. charity-model, advertising model, micro-payment model) and/or clarification of regulation rules (serving the public good through juridical initiatives). |
| 3 | Y | Y | X | N | N | Information is required, but it is not deliverable (at once). TASKS: Initiatives for new research activities. |
| 4 | Y | Y | N | Y | Y | Demand (active searching for information) is not given e.g. due to lack of (financial) sources. TASKS: Searching for adequate business models |
| 5 | Y | Y | N | Y | N | **There is no “market” (hardly any active information flow), although information are available (e.g. statistical data assets). TASKS: through education/providing of adequate methods the skills for using available facts can be transferred to the local players (e.g. monitoring issues like benchmarking, strategic planning, forecasting – Step2: “Do not give a man a fish. Teach him how to fish instead.”).** |
| 6 | Y | N | X | X | X | More information is required as necessary. TASKS: the cost of curiosity should be calculated. **The level of the awareness on the demand site should be improved through education (e.g. unnecessary physical examinations for a diagnosis instead of using of special indicators).** |
| 7 | N | Y | Y | Y | Y | Illogical situation: why would anyone search for something not really required? |
| 8 | N | Y | Y | Y | N | Market-equilibrium for dumb players: necessary and available information neither required nor supplied. TASKS: “past remedy” |
| 9 | N | Y | Y | N | N | Pure ignorance without supply. TASKS: waiting for new ideas |
| 10 | N | Y | N | Y | Y | **Lack of knowledge about the necessity. TASKS: Education of the local players about objective necessity of information processing. The fact-based strategy building is the counterpart to intuition.** |
| 11 | N | Y | N | Y | N | Real information without demand and supply: TASKS: construction of the whole information flow. |
| 12 | N | Y | N | N | N | Becomes necessary information sooner or later. TASKS: waiting for new challenges |
| 13 | N | N | N | Y | Y | Unnecessary supply (e.g. demagogy). TASKS: education! |
| 14 | N | N | N | Y | N | Available knowledge without any usage potential. TASKS: - |

Table No.1: Standard situation of the knowledge management (source: author)

Legend: SID = Subjective Information Deficit (requirement), OID = Objective Information Deficit (necessity), IDE = Demand for Information (active steps), WK = World knowledge (pool), ISU = Information Supply (active steps); Y= Yes (given), N = No (not given), X = arbitrary option

The standard situations of knowledge management show, that the video-bridging can be involved in important cases (c.f. education tasks). On the one hand, the most trivial use of video-bridge is the covering of lack of information. On the other hand, video-bridging can be used for modification of the level of awareness. Facts only cannot always bring the expected solutions: in most of the cases lack of methodology can be identified too.

## Fact-driven navigation in the virtual world of controlling

Controlling is a well-known practice in the business world. Controlling does not only mean to check processes afterwards. Controlling is also a type of planning. Controlling has to make fact-driven thinking possible. Fact-driven thinking processes try to complete each measured, observed data, and based on the highly structured data assets, fact-driven thinking try to derivate answers to real questions. Fact-driven thinking is a sophisticated modeling method (including the monitoring of the competitive models and their production processes too).

It is essentially important to note: Controlling does not exist without its counterpart: intuition. The planning of controlling tasks (although they should be highly automated) always begins with intuitive initialization. The monitoring steps of the whole controlling process are also intuitive. Finally, the decision (based on intuitively predicted and calculated future scenarios) is still intuitive anticipation.

Anyone could ask: Why controlling should be involved in the intuitive decision making?

Controlling delivers a logical frame to detect demagogy, to avoid partiality, to ensure equilibriums. Controlling is a loss-free conservation of human intuitions (c.f. chess-robots). Language-based communication and writing skills are unable to ensure loss-free conservation and transmission of ideas between individuals. Robots are the highest level of knowledge, but they don’t embody an error-free capability. Excluding robots (like expert systems, similarity analyses) from decision making is the same mistake as being overly self assured. Both strategies carry more risk than necessary…

The National Office for Research and Technology in Hungary (NKTH) based on a study of the Innovation Research Institute (IKU) declared (2009. January): the fact-driven decision making is on a very poor level in Hungary (<http://www.itbusiness.hu/hetilap/hirhatter/Innovacios_tudasbazis.html>). In 2006, The NKTH gave its support to the MY-X project (online tool for similarity analysis - http:my-xhu). The MY-X services makes possible for each decision maker to involve a lot of robot-expertise, furthermore they are online.

## Rural development and controlling

After accepting the initialized idea, the next important question of the Readers might be: Which type of questions can be covered in a controlling frame in case of rural players?

A rural object (like micro-region) can be seen as an enterprise. Therefore each decision problem is valid there too. Enterprises should have a strategic plan first. The already mentioned similarity analyses deliver important impulses to the finalization of strategic plans. The Duna-Ipoly Region (DIPO) is planning now relevant decision based on similarity analysis: First the human ideas for rural development were collected in a written form (<http://miau.gau.hu/miau/131/dipo_hvs.ppt>). In addition, each available statistics about the 19 DIPO-settlement and each regarded object (like 2 micro-regions, 2 counties, 2 statistical regions, and the country-level data) were stored into an OLAP-database (<http://miau.gau.hu/dipo>).

The first analyses aimed the derivation of kind of models which are able to detect whether a planned action will be executed successfully or its execution is rather impossible. The result of these analyses is a map about the detected force fields. Some of the force fields are pros for a planned activity; some force fields should be seen as cons. (<http://miau.gau.hu/miau/132/dipo/dipo.html>). A force field can be visualized as a figure:

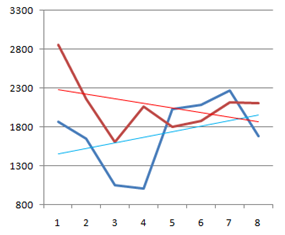


Figure No.1: A force field for the object “DIPO” (<http://miau.gau.hu/miau/132/dipo/dipo.html>)

Legend: Y-axis = amount of unemployment (per capita), X-axis = time (year), **red-line** = facts, **blue-line** = estimation of the similarity analysis, red-line = trend of facts, blue-line = trend of estimations.

A force field can be interpreted as follows: if estimations (or their trend) are of higher value than facts (or their trend) for the same time-unit, then unemployment could be higher. If unemployment could be higher than factual, then it is risky to plan a decrease of unemployment.

Estimation for similar figures were calculated in case of ca. 100 phenomena/object (like unemployment categories according to age, sex, education level, … and number of enterprises in diverse business categories like agriculture, industry, commerce, … ). The interpretation of the ca. 100 force fields could be made on different consistency levels:

* interpretation of a single figure
* interpretation of figure-groups in the same context (like unemployment categories according to age intervals)
* cross-object-interpretations (like DIPO, micro-region, county, statistical region, country, EU)
* interpretation of figure-groups in parallel contexts (like unemployment vs. enterprises)

A single figure always show a simple force field: if gravity is detected, then it is to expect, that an apple (sooner or later) should be searched down on the bottom and not in the air. Even though we know about the existence of the force field, we are unable to predict, when exactly the apple will be fallen. The interpretation of figure-groups in the same context (like unemployment categories according age intervals) can show e.g. in which age intervals can be expected that the employment rate/ number of employees will increase. The cross-object interpretation shows, which regional units react in the same way as another one, e.g. which region can deliver employees. The interpretation in parallel contexts pointed out, which phenomena (connected to each other) run parallel, e.g. it would be possible to create more agricultural enterprises, but there are not enough potential employees.

As it can be seen, the interpretation is either consistent or inconsistent. Consistency means: from the viewpoint of an expectation (e.g. production of energy plants needs rel. young, not highly educated male employees and a potential for creating rel. big enterprises in the agriculture) the force fields allows to meet the expectations. In case of an inconsistent result contradictory force fields can be identified in similar volume.

The second task in the DIPO-analyses was the distribution of the budget for online communication between the settlements. Besides statistical data, Google-results were integrated into the database. The Google-results showed how many matches exist for a predefined keyword (e.g. settlement name and status like city, village, etc). After collecting the Google-results (online presence per capita) there were high differences to detect (orders of magnitude).

The problem is: Should be supported a settlement at once, if it has less online news pro capita than the average number of news (per capita) of all settlements?

There are:

* “Communistic”-principle: the number of online news pro capita should be the same.
* “Buddhist”-principle: the world is in equilibrium. Nothing should be changed.
* Benchmarking-principle: depending on environment variables an approximation of equilibrium of each phenomenon can be calculated

The first principle does not accept the logic, that a low price can be both a dumping price and a rel. high price for a low performance. The second principle is a self-delusion, because both the strategy of “nothing to do” and the strategy of “always to manipulate” are dangerous to the existence of the human race. The golden mean is the relative objectivity or objective relativity, viz. the similarity analysis.

## Content embedding patterns

The Video-Bridge project aims to build a description matrix based on the logic of the pattern language and including the topic: content embedding patterns.

The standard knowledge management situation highlighted phenomena like information demand, information supply, world knowledge, subjective and objective information deficit, but they did not delivered explanations, what type of content can be identified actually, and what kind of information can be transferred with video bridge technology?

The former online library of the Hungarian agricultural research institutes OSIRIS (<http://miau.gau.hu/osiris/index.php3?dim=ismem>) used following folders to categorize information:

* [Citations](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=cit)
  + Currently there is no such record in our database!
* [Documents](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=dok)
  + [Abstracts of publications](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=dok&csopid=kiv_dok) (576)
  + [Full text publications](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=dok&csopid=full_dok) (2257)
  + [Publication (only title)](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=dok&csopid=kata_dok) (1179)
* [Analyses](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=elem)
  + [Offline dynamic reports](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=elem&csopid=pivot_lm) (12)
  + [Offline expert systems](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=elem&csopid=offszr_lm) (4)
  + [Online dynamic reports](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=elem&csopid=olap_lm) (12)
  + [Online expert systems](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=elem&csopid=onszr_lm) (4)
* [Translations](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=frd)
  + [from Hungarian](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=frd&csopid=int_frd) (23)
  + [Glossaries](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=frd&csopid=gloss_frd) (4)
  + [to Hungarian](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=frd&csopid=hu_frd) (2)
* [News](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=hr)
  + [Agricultural policy](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=ap_hr) (219)
  + [Food](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=food_hr) (39)
  + [Media monitoring for research institutes](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=sajto_hr) (5)
  + [News from research institutes](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=pr_hr) (5)
  + [Other](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=egyeb_hr) (23)
  + [Tenders](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=hr&csopid=tndr_hr) (3)
* [Multimedia objects](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=mumi)
  + [Maps](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=mumi&csopid=terkep_mm) (2)
  + [Pictures](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=mumi&csopid=kep_mm) (61)
  + [PPS objects](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=mumi&csopid=pps_mm) (8)
  + [Slides](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=mumi&csopid=dia_mm) (1)
  + [Video objects](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=mumi&csopid=video_mm) (5)
* [eLearning objects](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=el)
  + [Hypertext](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=el&csopid=hy_el) (7)
  + [Online cyclopedia](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=el&csopid=lex_el) (1)
  + [Special applications](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=el&csopid=sp_el) (3)
* [Projects, services](http://miau.gau.hu/osiris/content/elib/groups.php3?focsopid=prj)
  + [Abstracts of projects](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=prj&csopid=kiv_prj) (188)
  + [Instruments](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=prj&csopid=musz_prj) (32)
  + [Lists of publications by departments](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=prj&csopid=list_prj) (5)
  + [Short description of projects, services](http://miau.gau.hu/osiris/content/elib/subgroups.php3?focsopid=prj&csopid=kata_prj) (273)
* Application
  + OLAP
  + Macros
  + Other source codes

Surely, categorizations can be defined almost free (c.f. aimless logic of cluster analyses). Yet it is worth analyzing deeper the above listed folders and subfolders (having unfortunately e.g. overlapping effects):

**Citations** (c.f. impact factors) are only important in scientific environment, to describe the potential dissemination effects starting from certain studies. Therefore the video bridge project should not manipulate this special type of content as far as possible.

**Documents** (PDF, DOC, RTF, PPT, XLS, etc.) are a fuzzy group: this category seems to have objects finalized and archived. File servers (c.f. document pools) support rather browsing and less face to face communication or team working (c.f. video bridging). Of course, video bridging can be useful involved to teach the effective using of sophisticated file servers, online libraries or the browsing itself. The transfer of skills in the field of IT-possibilities may be always an important challenge for video bridging.

**Analyses** (c.f. data mining, reporting, expert systems, calculation patterns, etc.) are the most structured offer of content management. Analyses deliver answers for concrete questions. Therefore, if the local players are able to form appropriate questions and they have the necessary skills to browse/search for them, then they can close successful the knowledge management task alone, or they can have a first impression and after that they can use the video bridging to consult about the adaptation of certain generalized results to their given situations. The using of data mining facilities, expert systems and calculation patterns can be supported through video bridging.

**Translations** (the multilingual offers of contents) seem to lose from their former importance more and more. The automatic translations (c.f. artificial intelligence) solve the most of the problems in an effective way. However, good interpretations are only expected from human language experts. Each role involving especially human activities can be interesting for the video bridge project. Content interpretation (which is more than a pure translation) can be transferred to the local players, if the content is adequate.

**News**: They are seemingly the easiest form of information. But they have the most danger to involve incorrect information. Based on own experiments with students (learning communication and media skills) it can be declared in general: the human brain is infected through spurious patterns like unity expectations (c.f. the same value pro capita in case of arbitrary phenomenon). A short case study once again: the number of online news pro capita in case of settlements can be visualized easily, if somebody searches for a keyword (like name of the settlement and its legal status) e.g. in Google. These numbers may be essential diverse, (even with orders of magnitude). The question is, whether the settlements with low numbers of online news pro capita should be supported automatically? The answer is always: No, they do not! Conclusion: each adjective, verb, adverb needs a model to prove the correctness of it! Therefore the video bridge project can support the minimizing of this kind of functional illiteracy. The already mentioned experiments show on the one hand, only 1 of 10 students was able to detect at once traps in the news. On the other hand more than 50% of the news interpretations were only adequate after 4-6 consultations! The local players should be trained to be able to see clear!

**Multimedia objects** (maps, pictures, pps/ppt-files, videos, voice-files, etc.) are only special “jackets” for content (c.f. documents). There is no one production functions (rule systems) on the market being able to simulate: what kind of multimedia effect series should be used in case of given circumstances to achieve an effective knowledge transfer. Multimedia is therefore a special discipline of arts and hardly infected/affected through real scientific results.

**E-learning objects** are special objects formed from a lot of effects (documents, multimedia, application, etc.) E-learning objects have to provide, that the learning processes should happen without human interaction as far as possible. Video-bridging declared aims in the opposite direction. In fact: to use effective the face to face (human) impacts.

**Projects, services** are special objects too, namely here offers are described. The video bridge projects confronts with a lot of offers (like IT-solutions or the project description from itself). Therefore it may be important to support these types of challenges.

**Applications** are the most special objects. From point of view of the video-bridging applications have hardly any role (maybe as services – s. before). On the one hand applications were designed mostly to minimize human interactions. On the other hand applications (like OLAP-services) deliver facts and each action should be based on facts!

## Summary

The video bridge project can support training tasks (how to use some services) and to increase general capabilities like detection of dangers in news. Creation and usage of data assets can be also educated. The methodology for effective and efficient using of data can also be educated. Twelve years of project and education experience in Hungary shows that the targeted groups (students and local players) can work together. The local players are highly intuitive both for detecting problems and for checking potential solutions. The students are trained to automate calculation/analyzing processes. A video-bridge between these partners would lead to a new equilibrium (sustainability in strategic planning). The usage of statistical data for preparing strategic plans provides a stable background for intuitive on-site decision making. News deforms the potential message of facts (data), therefore the news (their written/spoken interpretation) should be proved deep as far as possible.