Energy Passages
Knowledge as interactive spectacle – investigative media art in public space

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Abstract

This article describes and theorizes the media art project "Energie-Passagen" [Passages of Energy] which is an interactive visualization of daily news in public space. Information, produced by a big daily newspaper is semantically analysed and generated as a floating knowledge structure in urban space. Passersby get involved into the participatory staging of a

visual and auditory space. Through their participation a playful interaction with words evolves in which their interests are expressed. The flow of words, i.e. the evocative interface of the installation works as a data platform regarding the interplay of the intervening actor with the data performer. The experience of reading the daily news like associative splints determines the interactive act and gets the city dwellers talk to each other. The interventions of the audience are statistically documented and visualized as an image of the city's energy. The media art project studies the transition from a real to a virtual environment within the urban space. It creates a space for thinking and knowledge through the interplay of physical space, data artefacts and user activity. The project aims to measure the mental energy of the city in an artistic way through interactive processes and to reveal a yet unknown image of the city through visualization.

The city as knowledge space

How can we measure the mental energy of a place? How will it become visible through interactivity of its inhabitants? What is the character of the interactive play material? Is it data compiled by the artist, or is it procedurally acquired data, for example via internet, as in this project. In which way are the data artistically processed? Are they processed by hand or following generative rules? These are the questions at the beginning of the project. It is a task of generative art to find simple and open interactive rules for an autonomous game. Algorithms are developed primarily by linguistic expressions and in the second step transformed in machine readable code. In the media art installation "*Energie-Passagen*" (Fleischmann, Strauss 2004 a) several strands converge: the concept of participation of residents, the development of a generative code, the development of an interactive stage, that shows and documents the play with its digital material.

The city itself is an anonymous construction, an entity that stands vis-à-vis to the inhabitants. The city stands in opposition to the others. Countless people and information flow into and out of the city through the network of transport channels. Only if the residents link urban life to specific moments – individual and collective, they will make it to remember particular places of the city. Through the media art installation "*Energie-Passagen*" [Energy Passages] urban space is employed as a stage for individual and collective narrations. The installation brings together the residents of the city – the

one and the other – with all their differences and analyzes how participative methods affect processes regarding the formation of public opinions. The interactive staging in public space creates a situation in which various points of views and manifold energies are able to unfold. The combination of virtual and physical space builds an urban realm, which evokes communication. What is reminiscent while observing the others is the very own, but at the same time the differing within the other. A perception which lives up to the other is never truly possible. Nevertheless, art is able to contribute to see and notice the others, i.e. to realize that I presumably do not know the other, but that I can learn from her or him. With this kind of understanding the intended language space turns into a playground for unconstrained exchange. The way people think within a city, the language of their media, their poets and the language of politics are all flows of energy that characterize a city. Language is mental energy, according to Heidegger it is the 'house of being'. Thought, written and spoken words form a flowing tissue; i.e. a language space that surrounds the built city like an invisible architecture. It is this energy that we unveil and visualize in the public city sphere through a news stream.

Urban space as place of publicly visible intervention

With the interactive installation we implement the daily news as an audio-visual flow of information on the square in front of the House of Literature in Munich (Strauss, Fleischmann 2005, 118-131). In November 2004 visitors find themselves unexpectedly within the interactive happening of a language-game (Sprachspiel) on the Munich square "*Salvatorplatz*". Electronic words stream across the ground in front of the illuminated House of Literature as well as across the staircase steps, stone benches and tables. The location is overlayed by a virtual light- and acoustic space. The installation transforms the newspaper into a passable walk-in data stream of daily news. Headwords of the latest news stories are illustrated like a news ticker as a flow of words. Artificial voices read out single words. Touch-screen and microphone enable visitors to modify the word flow and select individual terms. A semantic system immediately adds several similar 'friendly' words to this selection. The linguistic flux becomes visible to all

through the streaming of words. Some visitors try to identify the meaning and correlation behind the words; others toss words at each other like in scenic dialogues. All participants become actors and all data-entries become data-performers. Interactively the news gets rearranged and visualized on the projection screen as a 'Living Newspaper'.

The curator Christiane Paul describes the overlay of the physical city space with the linguistic data space as a fusion of two public spheres: "Literally inscribing the daily news as a linguistic and semantic space onto the streets of the city creates a fusion of public arenas that usually remain fairly separated in the physical sense: the public information space of daily events and the local, public space of the city traversed by a constant flow of people. While the inhabitants of a city naturally dwell in both of these spaces – the public domain of information and of the city – they usually do not have the possibility to experience these localities as connected networks or collaboratively reconfigure them" (Paul, 2004). In the overlaying of both spaces the installation opens up – sensually as well as cognitively – a new experience of collectively feeling a discursive mental space.
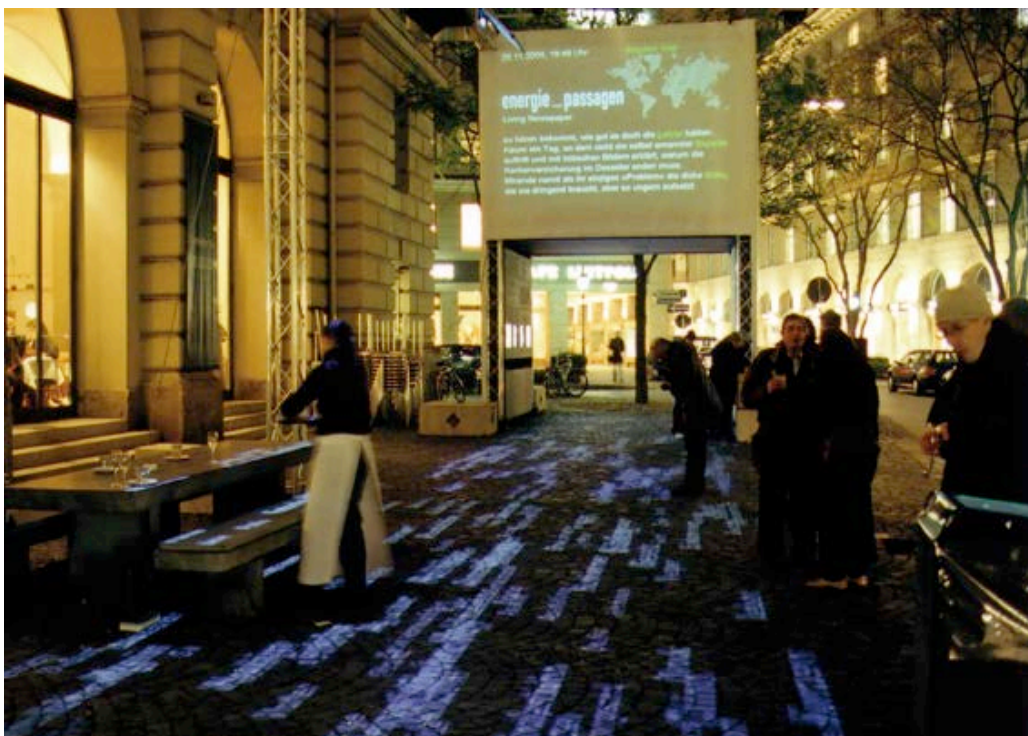
Figure 1. "*Energie-Passagen*" [Energy Passages] in front of the House of Literature in Munich ©Monika Fleischmann & Wolfgang Strauss, 2004

Artistic concept, influencers and techniques

The project title "*Energie-Passagen*" [Energy Passages] is derived from the understanding of language as mental energy. It is directed to Flusser's term of passage and refers to Walter Benajmin's "*Passagen-Werk*" [The Arcades Project]. Vilém Flusser defines the term passage as a journey in which single elements get 'passed through' as fragments of a broader context to merge single impressions as parts of a whole into a tangible image (Findeisen 2004). Flusser's term of passage is to be understood against the background of nomadism, the contemporary mobile lifestyle of the 'telematic society'. In contrast to 'sedentary' thinking in terms of fixed categories this corresponds to thinking in terms of relationships. Walter Benjamin's method of text montage in his "*Passagen-Werk*" [The Arcades Project] inspired the project, too. Adorno remarks that Benjamin tries "to do without any kind of evident interpretations and to get the meanings exclusively revealed through a way of shock provoking material montage" (Adorno 1970, p. 26). Likewise, yet in a contemporary manner, the newspaper articles are fragmentized by the code and are represented through the intervention of the participating visitors as a new montage. The participants are confronted with continuous new constellations of terms and establish hereby new associations.

The starting point for the statistical measurement regarding the inter-/actions is the frequency of particular, chosen words. By using RSS feeds of the Süddeutsche Zeitung [South German Newspaper] daily information is processed through a linguistic tool and automatically entered into the system day by day. Generated from 30.000 words of the daily edition, the newspaper is reduced to the 500 mostly mentioned catchwords. The new edition is calculated as a semantic conceptual network, projected as a word flow onto the ground and portrayed as an audio-visual panorama in the city realm. Architectural space is enriched and layered with artificial artefacts gently moving in space. An unknown image of the city is revealed.

Figure 2. The Süddeutsche Zeitung [South German Newspaper] as a semantic information network and interface prototype of the news flow, from June 24th 2004 ©Monika Fleischmann & Wolfgang Strauss, 2004.

News Streams running through ourselves

The sonification of the data by means of artificial voices extends the visual experience of the installation on the auditory level. A text-to-speech method converts the words to a sound-panorama and supplements the movement of the image complementary. The spatially staged sound, the fluid motion and the gestures of selecting create an atmosphere of ceaseless change. The performing visitors orient themselves according to the echo of these medial elements and it results in a form of echolocation. While one word is still being uttered, it is already heard and while it is being heard, inner images evolve. The hearing and imagination mutually reinforce each other. The sound scientist Holger Schulze describes the simultaneity of image, sound and motion as "The Orchestration of sensual and perceptual Media and News Streams" (Schulze 2005, p. 8) which has an impact on the human body. He states: "we could have the impression all the current newsstreams were running through ourselves" (Schulze, 2005, p. 7).

The visitors participate in a performative reading whose words literally flow through the body and make the audience perceive the place sensitized. This is being achieved through the seamless implementation of the virtual image and sound space into the real city environment. The expression Mixed Reality designates the technical format (Milgram, Kishino 1994, pp. 1321-

1329). However, we also understand Mixed Reality as the format of a seamless, sensomotorical and cognitive entanglement of perception (Strauss, Fleischmann 1999, pp. 93-98). The amazing compatibility arises because analog perception and digital fiction – i.e. the overlaying of physical and virtual reality – generate a thinking and knowledge space which one apparently can feel physically. This has been confirmed by visitors in numerous interviews.
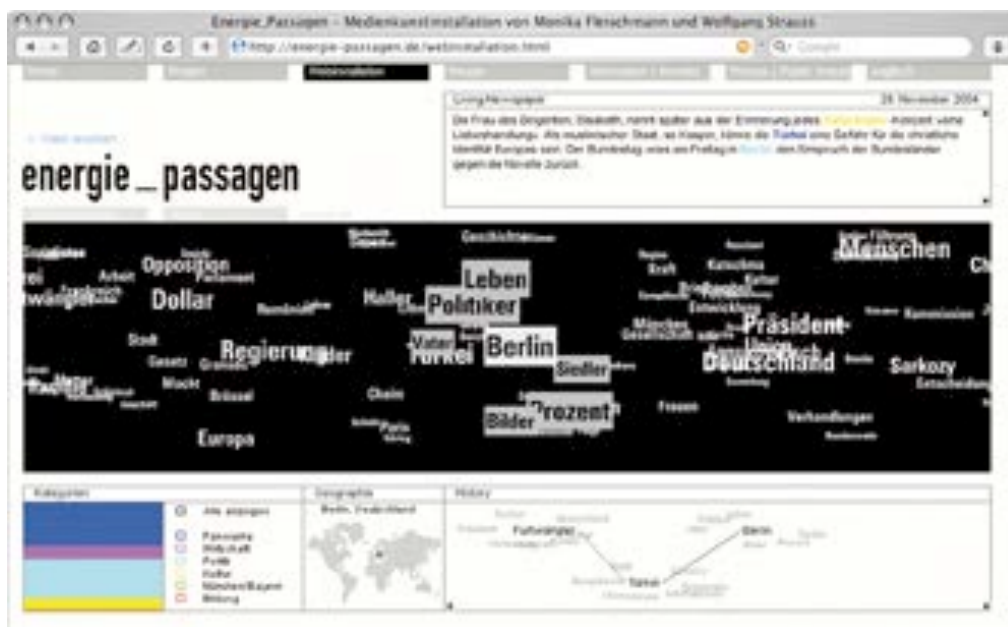
Figure 3. The interface model of the information flow in Web format. http://energie-passagen.de/webinstallation.html © Monika Fleischmann & Wolfgang Strauss, 2004.

The information flow as an object of reflection

The metaphor of the information flow serves to convey a picture of the information overload phenomenon. The daily news literally flow as a stream of thoughts across the square and turn into passable and apparently tactile entities in the urban realm. Passersby intervene in the staging by picking words according to their own interest. The system answers by offering five additional keywords, semantically related to the search word origin. The ring of words is chromatically highlighted in green, which floats for some time clearly visible in the projected white colored word flow. Thus the intervening actor is offered the opportunity to further explore the appearing words and to link them to own thoughts, associations or feelings. The

sociologist Sherry Turkle defines the "*Energie-Passagen*" [Energy Passages] as an evocative device generating a higher level of attention by means of the implemented staging. Thereby it becomes an object of reflection. Turkle characterizes the receptive experience of the visitors by the active participation in the process of the deconstruction and the re-construction. Turkle sees this as a chance that enables the visitors to get an idea about our culture of simulation: "The notion of a spatial experience of the discourse of the news within a city space and the possibility of deconstructing the newspaper captures the fragmentation of how media is experienced by citizen in a culture of simulation. It thus mirrors and concretizes an important cultural and political moment, turning it into an object for reflection" (Turkle, 2004).

Figure 4. Information flow, keyword and semantic linking. © Monika Fleischmann & Wolfgang Strauss, 2004.

Some questions arise amongst the participants when discussing the words. Those questions are discussed with other visitors on the spot: "Where do

these words come from?" "What do these related words have to do with my selected term?" "In which way is the ring of words related to my keyword?" "Are the words connected to the current news?" What really matters to us as artists is not the precise search for information, but the dialogue itself and the personal associations arising from it. The visitors interpret the given text materials and elaborate an oftentimes critically changed, startling or astonishing meaning to the contents. By means of this montage in the form of dialogue, the intervening performers stage new knowledge in processes of narrative reading.

The interface as a rhetoric figure

The installation is a rehearsal stage for interactivity. The interfaces to this performative platform provide access to the play material – the words. The information flow as interface is a rhetorical figure and a stylistic device for reading and writing. Its function is to inspire and directly expand an exploratively ascertainable supply. The notion flow refers to the continuous ongoing data flow determining our today's virtual environment. It's an artificial flowing, however, bearing a clock pulse like a real flow. The flowing accompanies the interaction and spurs it on. The information flow and the semantic network of related words are data performers. Before we go on stage too we pick a word while thus signing us up as a fellow player.

From the respectively used digital and rhetorical figure emanates the mirror figure of the human actor. As soon as a visitor chooses a word, the information flow is caused to stop. The touch screen interface activates a dialogue with the virtual data. Invisible connections between the words become visible. The interaction inspires for evolving narratives. The interface practically speaks to us and says: "It's simple! Just select a word and it comes by instantly." Though, the word comes along with further words. It is as if the word wanted to say and demonstrate: "Look who I've brought along." Thereafter the mind-boggling number of 500 words is diminished to five to six words.

Figure 5. Touch screen interfaces and the 'Living Newspaper' as a montage resulting from intervening participants. © Monika Fleischmann & Wolfgang Strauss, 2004.

Based on the words and their original phrases a new montage of the text comes into being that portrays the personal interests of the visitors. Embedded in urban space three elements built up the virtual space of dramatized time: the *"Living Newspaper"* together with the data flow and the panoramic audiosphere. Whereas while reading the eyes usually pursue the text, i.e. the letters within the line; they now focus to read the moving and passing word. The words pass by, but the eyes try to keep up with them. Some visitors take advantage of the moment in time and the motion by physically going along with them while reflecting on the word and its meaning. The reading lasts here just as long as the reflecting on a word persists. The phonetic transcription acts as a figure of "*Appell*" (appeal). The performative act is initiated: from being an observer to becoming an actor, an intervening participant and finally a data performer.

Change of roles

The staging offers space for manifold social roles. The experience of being watched is part of the staging. Furthermore, a continuous change of roles takes place. The visitor becomes a spectator, then he becomes an actor and

thereby an element of the staging. The audience encounters a wide range of roles regarding the dialogue between the visitors, the multi-user game and the anonymous situation of the internet spectator. Instead of mediating a linear text the digital knowledge structure conveys a dialogue between the participants and the digitals artefacts. Through performative reading the news are being read anew by the audience. Freed from context and syntax of the original texts the isolated words open up room for associations and speculations. Kaspar Spinner, an expert on language didactics, describes operative procedures like permutation or omitting as cognition fostering when reading and interpreting texts (Spinner 2001). The installation "*Energie-Passagen*" [Energy Passages] provides a reading and writing technique which creates a particular imaginativeness. Therefore, it is not just simply about seeking and finding information, but rather about composing own thoughts in dialogue with the information.

Narrative Reading processes

The interactive staging initiates a reading movement from keyword to keyword. The visitors take a journey alongside the single words to discover and unveil semantic correlations. The reading process resembles doing detective work. Hidden correlations and connections are complemented and interpreted together with own thoughts. With this associative filling of gaps the participants create their very own access. Wolfgang Iser, a specialist in German studies, depicts reading as a process in which meaning of literal texts gets generated in the first place (Iser 1994, p.195). Meaning results as a product from the interaction of text and reader. Regarding the collective reading process the meaning results as a product from interaction and participation. The visitors act as intervening participants of the word-sound-performance. They communicate through the flow of words. By interweaving and absorbing the artistic work appears as an interwoven texture in the urban space.

Media aesthetics specialist Peter Matussek points out that the "*Energie-Passagen*" [Energy Passages] resemble a staging in which text and reader are equally involved: "It is not about throwing around technoid text fragments like what the hypertext cult celebrated excessively, but filling the

remaining gaps using in an odd way smoothly operating automatisms. This especially due to the strikingly harmonious, however, fragmentary recomposing of what we have latently retained as consumers of the news. In this way of staging life is emphatically breathed into scripture. It becomes vivid not just because of the bare motion of pictures itself, but because of its media practice to stage performative readings in which text and reader equally participate in a constructive way. Additionally, the compensatory flare-up makes the motion of pictures continuously flirt with its own demise. In the contemporary silicon age the future of scripture rather lies within visual, sculptural and architectural forms of expression than in "secondary orality". This is exactly what the installation makes the visitors sensitively experience" (Matussek, 2004).

Neuropsychologists distinguish two different processes to identify the meaning of words which the brain holds and which are activated in divergent contexts. When reading a simple and ordinary text the act of reading appears easy and effortless. We do not have to think about the single words. But as soon as we have to pay attention on particular words or phrases, because of lacking letters or a bad and hardly readable handwriting, we are forced to reason about the meaning implied by the text and the reading process loses its automatisms. Therefore this hold-up of reading results into attentiveness. A similar method is being used for interactive staging. The reader slows down his movement and starts to wonder about the word meaning and their semantic correlations. Through using the words of a non-linear system the interface represents a narrative entity that turns the reader into a performative one. Everything in this language game depends on what is happening at the moment. That means to play with language, to draw meaning from it, to reconsider and relocate the involved words. Here, to relocate means giving meaning to words. Recombining the words brings out mental activity and unforeseeable knowledge.
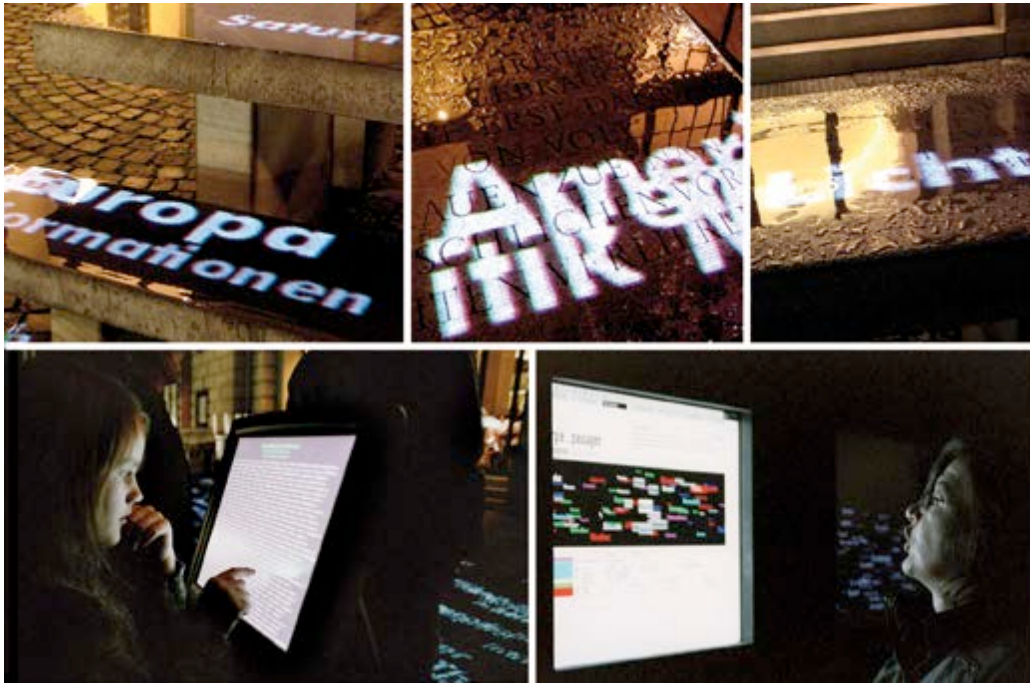
Figure 6. Performative language games and verbal exchange between participants ©
Monika Fleischmann & Wolfgang Strauss, 2004.

## The installation as measuring device

The visitors' intervening is digitally registered and recorded as 'local energy'
(Fleischmann, Strauss 2004 b). The occurrences of the most frequently
used newspaper words are statistically determined throughout the four
week long exhibition. The *Sueddeutsche Zeitung* [South German
Newspaper] is one of the most important opinion-forming newspapers in
Germany. The infographic shows the seldom frequency of education and
culture, whereas the reporting on politics and economy dominates.
Particularly frequently used words of the newspaper such as "percent",
"years", "Germany", "millions" are of objective quality. However, the
majority of the words selected by the participants are of emotional quality:
"price", "parents", "victim", "love", "food", "girl". Thus the sober pragmatics
of the newspaper faces the emotional subjectivity of the intervening
participants.
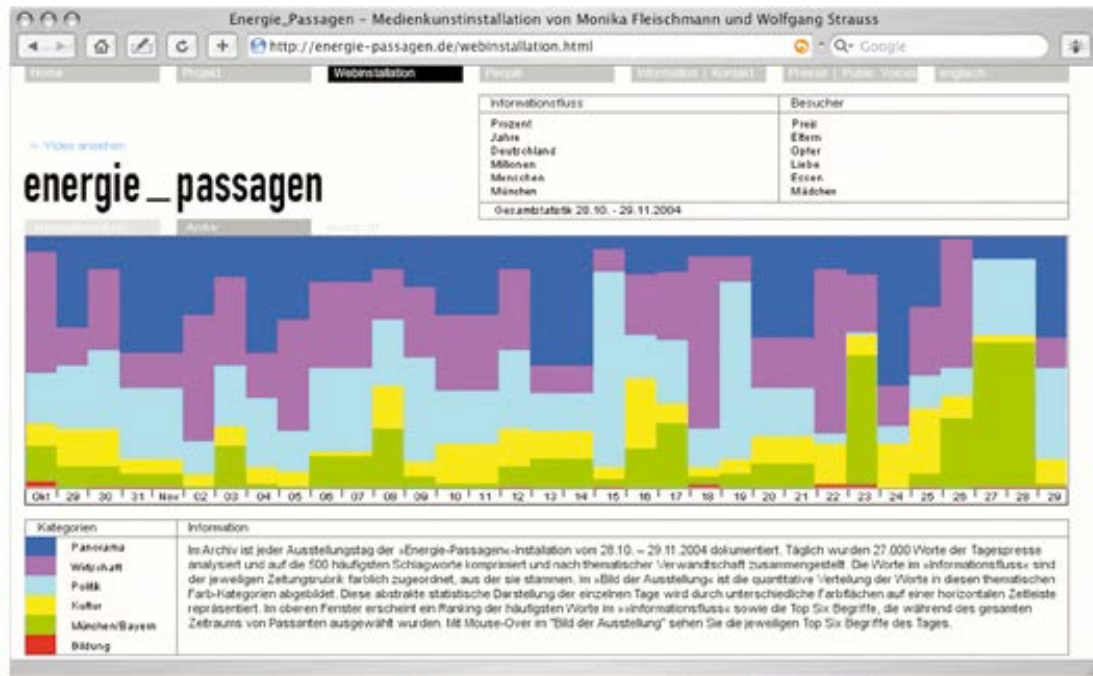
Figure 7. Color coded interactive measurement protocol ©Monika Fleischmann & Wolfgang Strauss, 2004.

Regarding the visualization of the dialogue between citizens and newspaper publishers, one is reminded of Kevin Lynch's "Image of the City" (1960). Lynch examines the city as a physical form, because he assumes correlations between the human perception and the architecture surrounding them. "*Energie-Passagen*" [Energy Passages] stage the city as a rehearsal space for others based on investigative monitoring tools. The installation links individuals in public space and evokes a critical observing. This interactive process offers the participants a local feedback that yet increases in the global networked echo chamber.
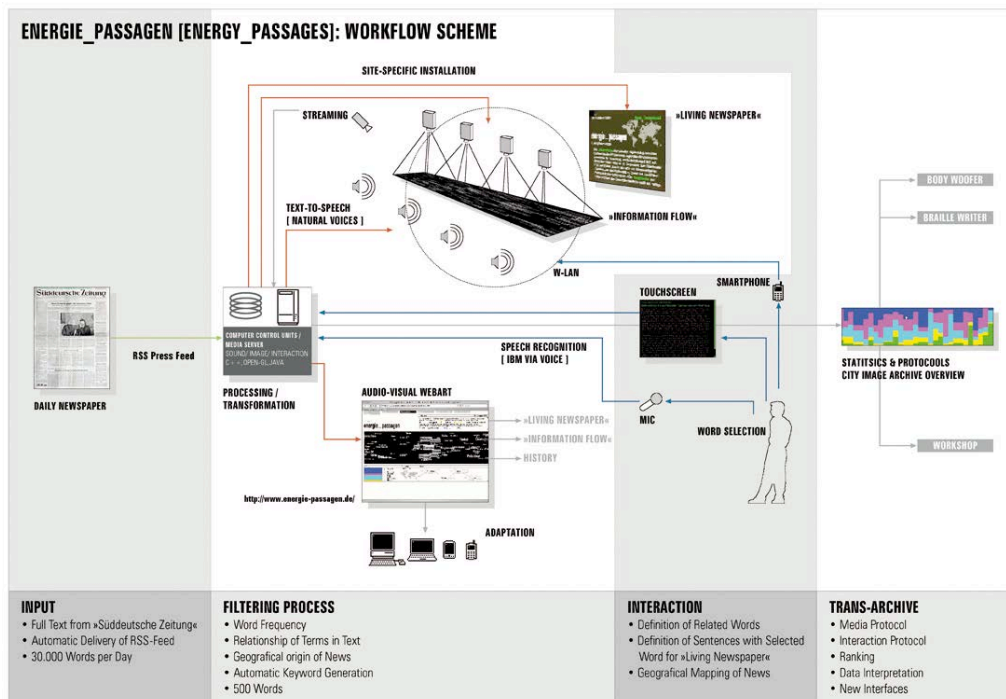
Figure 8. Workflow of the interactive installation © Monika Fleischmann & Wolfgang Strauss, 2004.

Space of experience becomes thinking space

While the city architecture deals with processes of form finding and design, this installation reveals the city energy and the unforeseen knowledge of their citizens by processes of unconcealing due to its interactive dramaturgy. The participants are beholder, actor, writer and interpreter in one and the same person. While some act, they are staging performative acts for the others. The participants experience themselves in the aesthetic reception as data performers who perform a scenic work in conjunction with virtual data performers. The different forms of interacting enable the visitors to experiment with their social role as actors in a way which is not given in the real day-to-day communication. The audience experiences the changing of meaning through visual and acoustic processes of decontextualization. The interactive installation highlights the experienced knowledge. The participants experience a thinking space which they shape themselves.

In his autobiographical novel *"Live to tell them"* the writer Gabriel Garcia Marquez mentions an example of analogue interactivity. He reports about the newspaper El Espectador from Bogota. Like at school a blackboard was

issued on the balcony of El Espectador by 12 clock noon and at five clock in the evening. The last messages were written in chalk. Around this time, a crowd waited impatiently for the news. The street-readers also had the opportunity to welcome the good news with their ovation and those who displeased them to boo or to acknowledge with stones on the board. This was a direct form of democratic expression of the Espectador, a thermometer to measure the fever of public opinion (Marquez 2002). Here we find an early model of interactivity.

The Whole Earth exhibition in Berlin, presented at House of World Cultures in summer 2013, brings light to another early participation model on the level of a nation state. At the beginning of the Allende government in Chile a Cybernetic Commission was initiated to develop new work processes, e.g. computerized cybernetic steering of economy. One of the first sketches for this project points out the need for participative structures to generate and share new ideas. (Diedrichsen 2013) "*Energie-Passagen*" [Energy Passages] would be a reasonable digital model for the creation and storage of ideas.

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