

## **The Dynamics Of User Generated Content: Case Study LommelTV**

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### **Abstract**

In the decade where Web 2.0 tools blossom and telecom innovations with support for user generated content are popping up everywhere, user research focusing on key factors of content creation is no longer a luxury. A profound understanding of the user and his motives for content creation is vital to make technological innovations socially successful. This objective will not solely have economic consequences in the world of telecommunications. Social relations are also believed to benefit from these tailor-made applications as they get enriched during the user experience process.

In this paper we will discuss an example of a unique innovation driven by user generated content, namely LommelTV. LommelTV is based on the Alcatel-Lucent ‘MyOwnTV’ application (Alcatel 2006). This is an IPTV application developed by Alcatel-Lucent. It enables people to create their own digital television channel and publish their own content to this channel for others to be viewed. In 2006, the city of Lommel was chosen to trial this application. The citizens of this Belgian city started creating their own television content. The movies and photo slideshows on LommelTV entertain the viewer with community activities, city events, holiday memories and funny footage. A broadband internet connection, a settopbox and a photo- and/or video camera are all it takes to generate content for LommelTV.

In order to generate the optimal user experience a multidisciplinary team consisting of engineers from Alcatel-Lucent and communication sociologists from the University of Leuven supported and investigated the LommelTV user community. Special interest has been given to the process of content generation.

A first round of results shows a diverse usage pattern of LommelTV among the selected citizens. Content analysis of LommelTV and in-depth interviews with all the participants revealed that the process of creating content appears to be a complex one. Based on these research results and the input of extensive field work, a theoretical model was developed, exploring the psycho-social process of content creation. This model indicates that the reasons for (not) using the application actively do not lie solely in the technical features. Rather, when creating content, users appeal to their own motivation, inspiration and audience perception. These key factors will be discussed thoroughly in this paper as well as the question whether this model is suitable to reveal key factors in other types of applications focusing on user generated content.

## **Introduction: Understanding User Generated Content**

In the last decade we have witnessed the rise of the internet. By the year 2007 the internet has already undergone its first transformation. This transformation is denoted by the term 'web 2.0' (Musser, 2006). Web 2.0 encompasses a set of digital technologies that have led to the rise of the weblog and wiki. This technological progress is inextricably coupled to social innovation. In 1999 Berners-Lee already indicated that the Internet should also be about creating things with other people (Berners-Lee, 1999). Popular web 2.0 services such Flickr and Second Life facilitate collaboration and sharing between users. Consequently, the threshold for non-professional users to create and share all sorts of media content has been drastically lowered. This was initially so for the written text (e.g. blogging) but soon after other audiovisual media followed such as music (e.g. podcasting), photography (e.g. Flickr), and video (e.g. You Tube) (Gillmor, 2004).

As a result, in the decade where Web 2.0 tools blossom and telecom innovations with support for user generated content are rapidly emerging, user research focusing on key factors of content creation is no longer a luxury. A profound understanding of the user and his motives for content creation is vital to make technological innovations socially successful. This objective will not solely have economic consequences in the world of telecommunications. Social relations are also believed to benefit from these tailor-made applications as they get enriched during the user experience process.

### **Case study LommelTV**

LommelTV is based on the Alcatel-Lucent 'MyOwnTV' application (Alcatel 2006). This is an IPTV application developed by Alcatel-Lucent. It enables people to create their own digital television channel and publish their own content to this channel for others to be viewed. In 2006, the city of Lommel was chosen to trial this application. The citizens of this Belgian city started creating their own television content. The movies and photo slideshows on LommelTV entertain the viewer with community activities, city events, holiday memories and funny footage. A broadband internet connection, a settopbox and a photo- and/or video camera are all it takes to generate content for LommelTV.

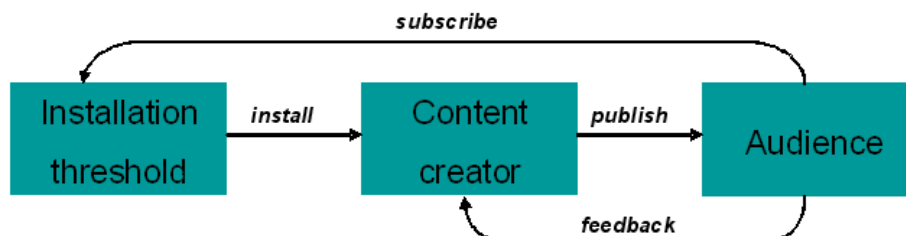
A multidisciplinary team consisting of engineers from Alcatel-Lucent and communication sociologists from the University of Leuven supported and investigated the LommelTV user community during the trial period. At the end of August 2006, the research team conducted a first round of interviews with the users of LommelTV in order to get feedback about technical issues as well as societal aspects concerning LommelTV. Each participating community was interviewed separately. The interviews took place in a familiar setting for the users, e.g. a home or in their clubhouse. As of November 1<sup>st</sup>, sixteen interviews had been completed, totalling 35 persons.

The users' feedback provided the research team with considerable input for adjustments, improvements and recommendations, not only relating to the application but also to the diffusion of LommelTV in the city of Lommel. Gradually, it became clear to the research team which forces were at play in making LommelTV a successful application. It was necessary to map these forces to stay focused on the research questions and take this research to the next level. So this input, together with the field work done between November 2005

and November 2006, was the starting point in the modelling of a psycho-social process of content creation (Fig. 1).

Firstly, a general overview of the model will be given. Thereafter, the key elements of the model are highlighted, followed by several attention points.

**Fig. 1: Psycho-social process of content creation**



## General overview

LommelTV is about generating content, whether or not about Lommel, for an audience in Lommel by people from Lommel. Before a user starts participating in LommelTV, the installation of a setup box is needed. This device allows you to watch LommelTV on your television and provides the login to the web application where movie clips can be uploaded to LommelTV. After a successful installation, the user can start working on his desired content for LommelTV. The process of this content creation is influenced by several factors, motivation being one of them. When the content is ready for publication, the user publishes it to LommelTV, which allows the audience to watch and judge his work. The feedback of the audience will help the user in redefining his next content creation process. Audience that is not yet in possession of a setup box can, at any time, subscribe to LommelTV.

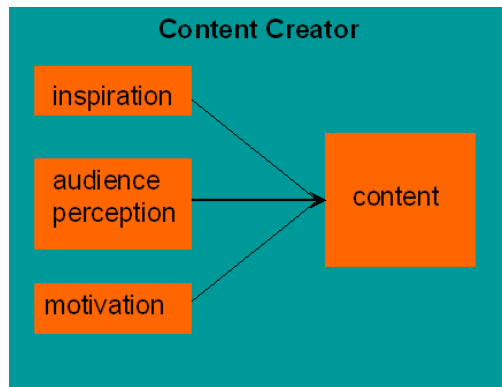
These are the key elements in the psycho-social process of content creation. They constitute the application's general framework. In the next section, each of these elements is further explained in depth starting with the content creator. He/she forms the pivotal element in the psycho-social process.

## Key elements

### Content creator

The process of creating content is a complex one (Fig. 2). A user has to feel inspired as well as motivated to create content he's satisfied with and wants to share with a local public. A motivated user can be stuck in hopelessly seeking inspiration and as a consequence stops generating content. On the other hand, an inspired user who, for instance, does not know how to edit movie clips, must be motivated enough to master (basic) video editing skills or no content will be created.

**Fig. 2: Content creator**



Being inspired and motivated are however not the only criteria leading to content creation. The user's perception of his audience is an important additional factor. If you decided to join the project, it's because you want to share your work and have an incentive for reaching out to an audience. The exact size of the audience is at that point irrelevant. Whether the audience of LommelTV consists of 300, 3000 or *only* 30 persons, if the user somehow gets the impression that LommelTV is being viewed and there is an audience to whom he can publish, the content creation process starts. Later on, and only for some types of persons, the exact size of the audience will matter. But even then, it will all be about the user's *perception* of his audience. The application's usage will make it impossible to measure the audience's exact size.

Every time the user has the intention to create content, he will subconsciously check the status of his inspiration and motivation and link this to the thoughts he has about his audience. It may be clear that in this process there are enough elements that can hamper content creation. More details about this can be found under 'attention points'.

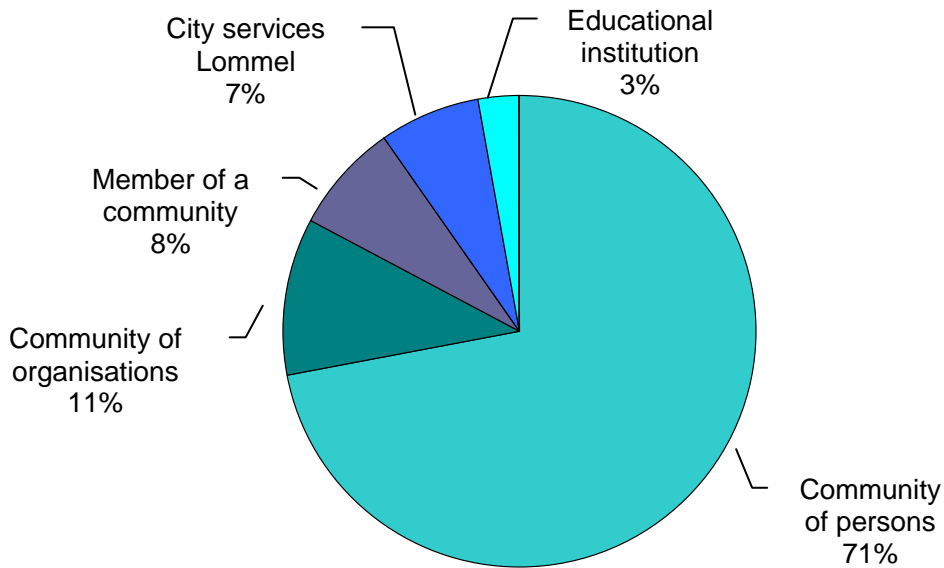
## **Content**

What is the content that can be found on the LommelTV channels? To get an answer to this question a content analysis of the movies on LommelTV was conducted in October 2006. 185 movies, spread over 43 channels and owned by 19 communities, were analysed.

Firstly, there are noticeable differences with regard to the *numbers of movies per community*. Bruudruuster, a multimedia community whose main activity consists of making pictures and movies of parties and events, is taking the lead with 58 movies. DALO, an athletics club, is in second place (22 movies). LOC, the entrepreneurs club of Lommel, is third with 14 movies on Lommel TV. The administrator of both the Dalo and LOC channel is the same person.

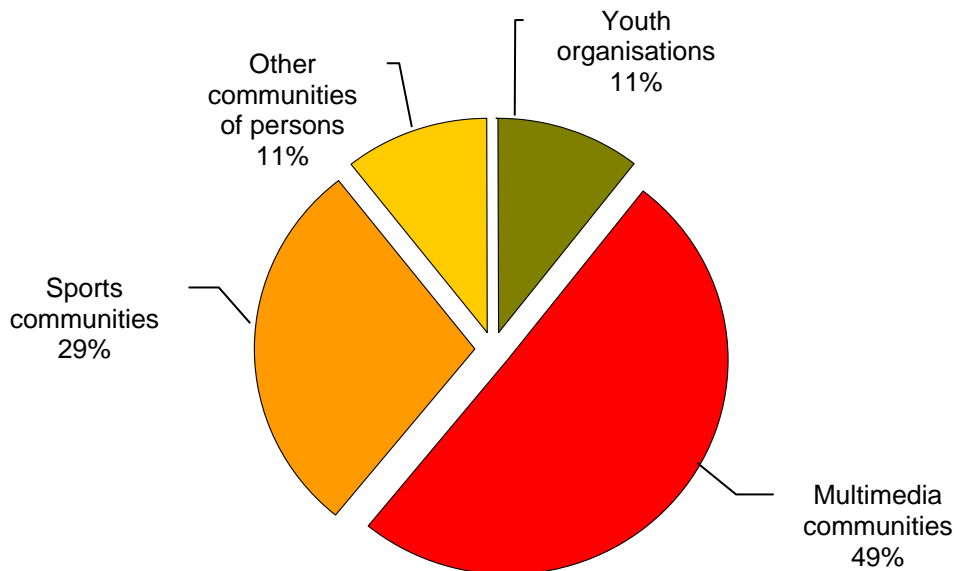
Analysing the movies in relation to the type of communities that are the *owners of the channels*, we observe a superiority of 71% for 'communities of persons'. This implies that 133 of the 185 movies are the property of communities of individuals. Communities that consist of organisations, e.g. LOC, represent 11%. 7% of all the LommelTV-movies are owned by the city services of Lommel, while educational institutions are the owners of only 3%. 8% of the movies are more personal and are owned by a member of a community. These movies deal for example with personal hobbies, personal activities with friends or family...

**Fig. 3: Percentage of movies in relation to channel owners**



The segment of ‘communities of persons’ can be divided in subgroups. Almost half of them are multimedia communities (49%). These are communities that work with video, photography, computers... Sports clubs represent 29% of all ‘communities of persons’, while 11% of the movies that are made by a community of persons are owned by a youth organisation.

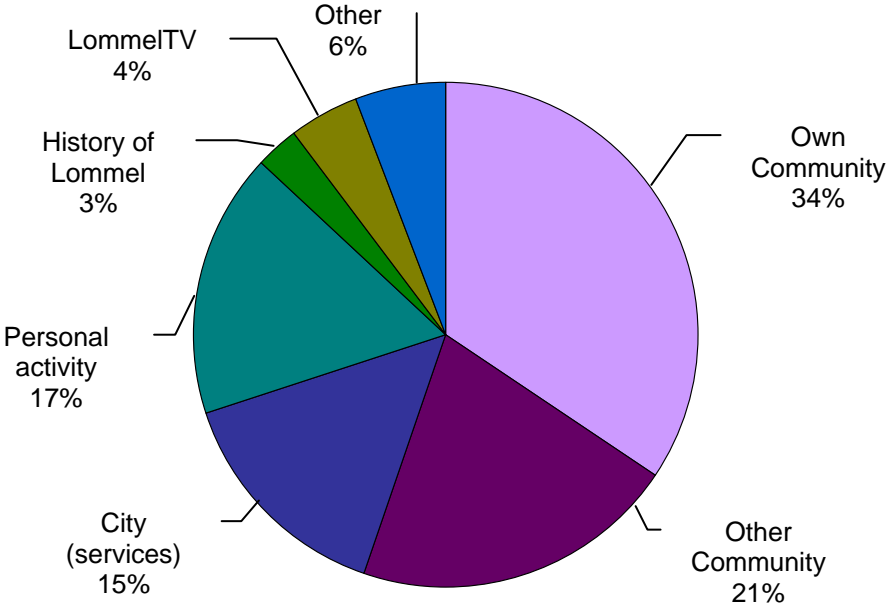
**Fig. 4: Division of Community of Persons**



The content of LommelTV was analysed on two levels. First of all we examined the *type of activity* that was covered in the movies. 34% of all the movies concerned an activity of the own community. Furthermore, the communities like making movies about activities of other communities as well (21%). 15% of the LommelTV movies are about Lommel or about city

services and 3% deal with the history of Lommel. Personal activities form a segment of 17%. LommelTV itself is the theme of 4% of all the movies

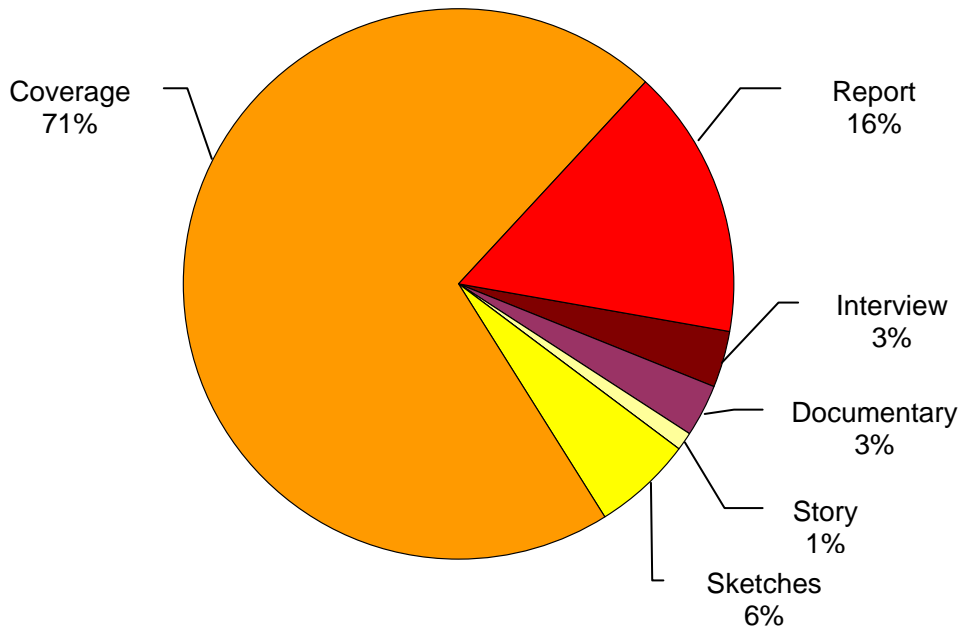
**Fig. 5: Type of activity covered**



The second level on which we analysed the content of LommelTV, are the *movie themes*. Per movie, one or two themes were indicated. Table 2 represents the top 10 of the themes that occurred the most. Sports are clearly the most popular on LommelTV (55 of 185 movies). The second most popular theme is music, which occurs in 22 of 185 movies.

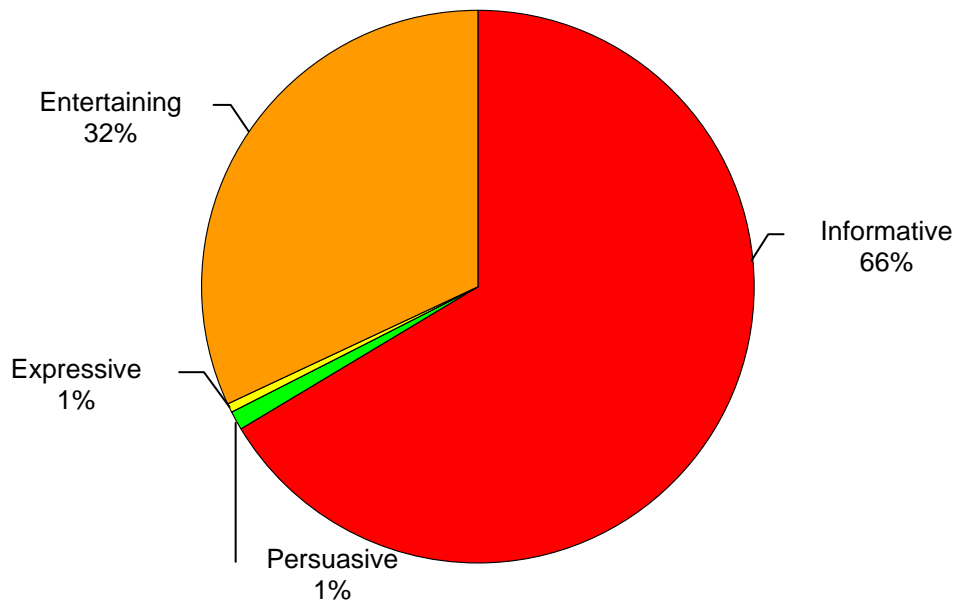
When we look at the *formats* that are used on LommelTV, we notice an enormous dominance of the coverage format (71%). 16% of the movies are reports, which are coverage's with a reporter, and can include an interview. Interviews themselves, as well as documentaries, concern only 3%. Fiction is not very popular on LommelTV: only 1% of all the movies are stories and 6% are sketches.

**Fig. 6: LommelTV formats**

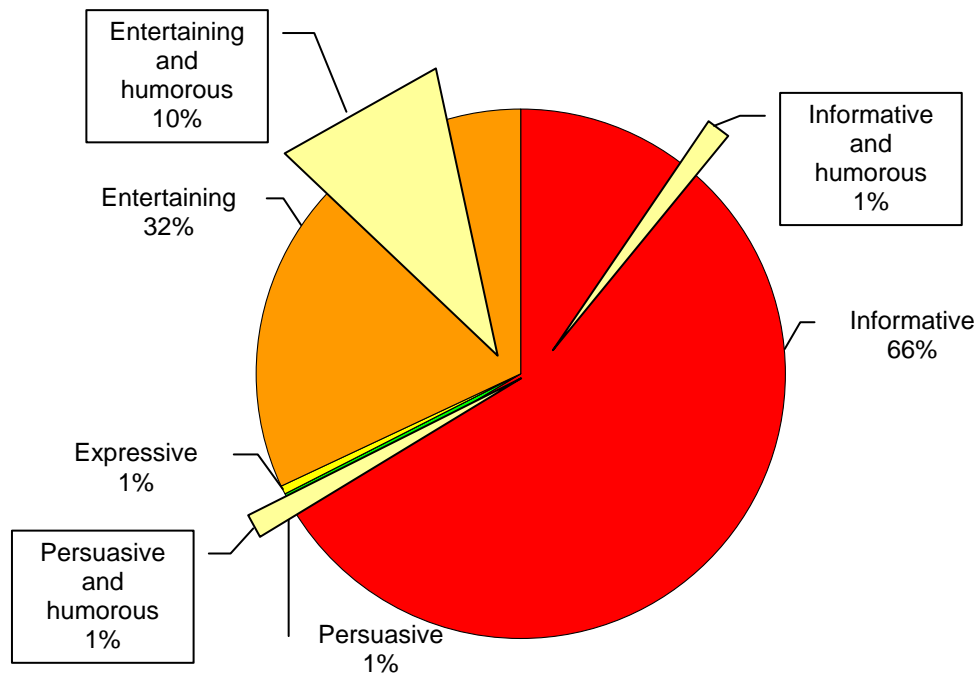


The *tone of the movies* on LommelTV corresponds to the used formats. The greatest part (66%) of the movies is informative. With 32%, the entertaining movies make the second big part. Expressive and persuasive movies include just 1%. With regard to humour, we can see that 12% of the LommelTV movies are humoristic. These movies are especially entertaining and to a much lesser extend persuasive and informative.

**Fig. 7: Tone of the movies**



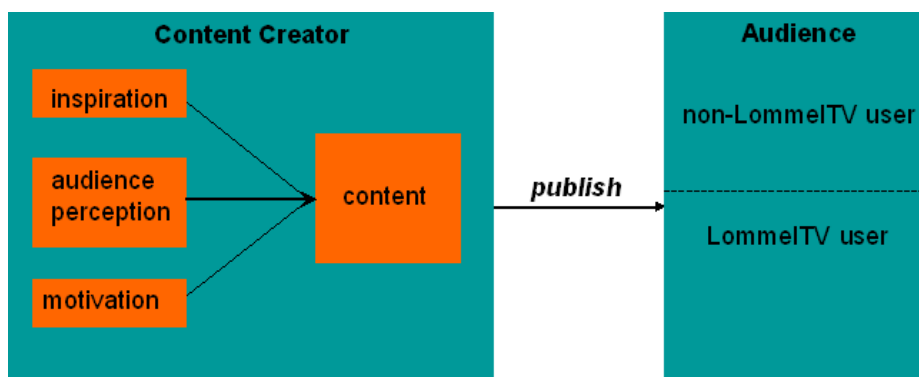
**Fig. 8: Tone of the movies (humorous)**



### Audience

After the content creator has made his content ready for publication through footage editing, he publishes it on LommelTV. From that point onwards the audience of LommelTV is able to watch it on television (Fig. 9). But what is LommelTV’s audience? And can it be the same audience as the one perceived by the content creator?

**Fig. 9: Audience**



A part of the audience of LommelTV can be defined by users of LommelTV and their viewing habits. On the other hand, there is a part of the audience that can not be exactly measured: the non-LommelTV user.

### *Non-LommelTV user*

There are two kinds of non-LommelTV users who complete the audience: friends and family of the LommelTV user or other members of the community and people at public spaces where LommelTV can be watched. The first group of viewers is relatively small. They watch LommelTV once or twice due to curiosity but they are no candidate for having a personal settop box at their own home. A possible motive behind this lies in their perception of absence of a possible audience consisting of non-LommelTV users.

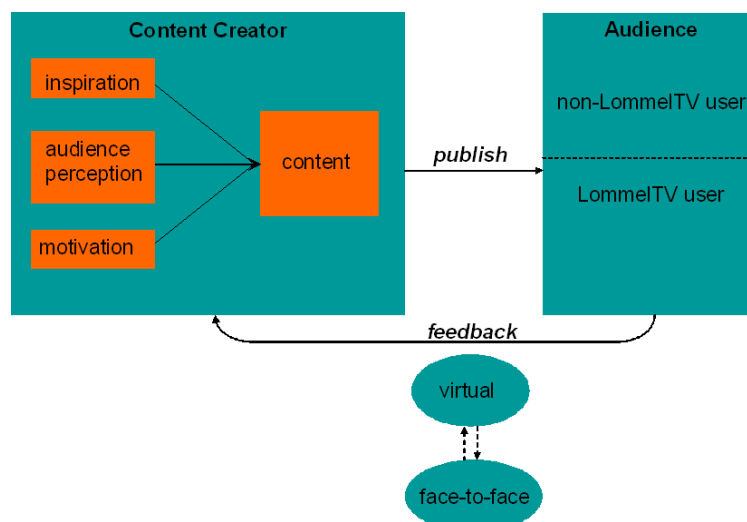
How can non-LommelTV users, who have no connection to LommelTV users, watch LommelTV? After the public launch of the research project in May 2006, four public places opened their doors for the citizens of Lommel to come and watch LommelTV: the city hall, the library, a museum (Museum Kempenland) and the cafeteria of the elderly home. It is impossible to predict how many people have passed by these televisions since and caught a glimpse of LommelTV or stood still for a minute and watched some movie clips. However, it became clear that the impact of these places is rather small. Their role and tactics needs to be reviewed. These places are not very inviting to watch television and do not appeal to the imagination of the content creators as places where their movie clips can be watched and appreciated. In this context, a compilation of the best movie clips on LommelTV was put on DVD and is, for now, distributed to the event hall, the waiting room of a doctor and a restaurant. A variety of public places is thus gradually established. A further expansion of public places is put on the agenda.

It is especially the unknown presence of these non-LommelTV users at public places that influences and forms the audience perception of the content creators. This problem will be discussed in the ‘attention points’.

### **Audience Feedback**

The positive power of the audience lies in the possibility of giving feedback to the content creator. And that is what the content creator ultimately seeks and drives: comments on his work, so he will know if he is on the right track or has to make adjustments in his content creation method.

**Fig. 10: Audience Feedback**



We can distinguish two kinds of audience feedback: virtual and face-to-face. Ratings once or twice a month and a counter on each movie clip are examples of virtual feedback. These are hard facts: how many times has my movie clip been watched; where do I stand in the top 10 of most watched movie clips; who are my ‘rivals’? This kind of feedback influences the user in his next content creation process. For example, he can find inspiration in the themes of three most wanted movie clips. He can be inspired to do better than his rivals. The audience perception of the content creator will benefit from receiving this kind of feedback.

The audience is, of course, also able to give face-to-face feedback. The LommelTV users can do this at the monthly meeting of the LommelTV council. This is a meeting place for all the LommelTV users where problems and initiatives concerning LommelTV are discussed. It is of course also possible for both the LommelTV users and the non-LommelTV users to encounter each other on the street or at events and give feedback on their work. For the moment, coincidence has to be on your side however to meet the right persons at the right places.

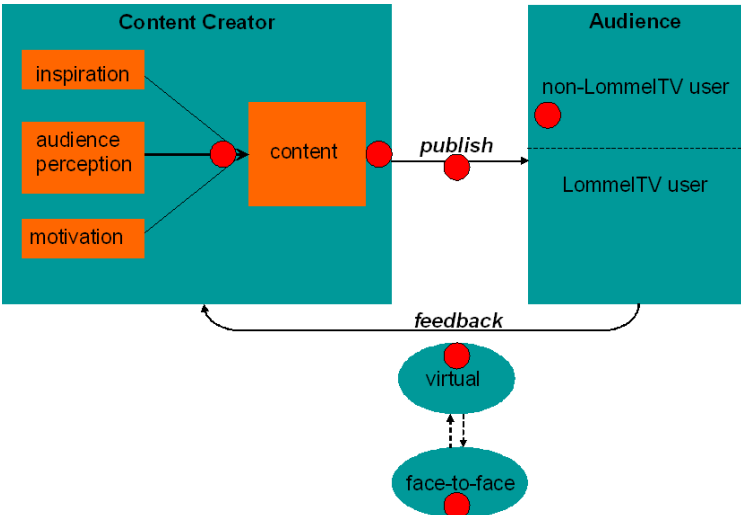
Face-to-face feedback will also have an effect on the user’s content creation process. As already mentioned: whether the audience of LommelTV consists of 300, 3000 or *only* 30 persons, if a few people address a user on the street and say “Nice work”, then he gets what he needs to continue LommelTV and his audience perception has improved.

This key element of the model has also some attention points which will be discussed in the next section.

**Attention points**

For every key element in the model, the research team has placed attention points to stress out current issues and opportunities of LommelTV (Fig. 11). These points have surfaced during fieldwork, at the LommelTV councils and in the feedback interviews. It is input from the users themselves. Each attention point will be explained and illustrated by one or more fragments of the feedback interviews.

**Fig. 11: Attention points**



### **Before content creation**

Three psycho-social processes are at play before a participant decides to make content for LommelTV and before a user goes for the next round of content creation. A clear inspiration and (internal as well as external) motivation is necessary.

*“If it is being commercialized, and it would stay the way it is, then you are a part of it from the very beginning. Imagine that this would happen within two years, we will have already a lot of content. When you have to start from scratch and make the first movie, at that time we will have like fifty movies.”*

Becoming an innovator is a driving factor for some of the users of LommelTV. For a larger group of users, the motivation for participating in LommelTV is promoting their community.

*“That is the only reason why I participate in the project [promoting our community]. If it is purely community TV in Lommel, and if it stays a labyrinth like today, then it is not worth it. There has to be a more obvious structure. Now the names of the channels are chosen voluntary, we are also wrong about that.”*

Feeling inspired and motivated is not always enough to start creating content. Why put all your effort and time in creating some content when, in your perception, no one can watch it?

*“LommelTV is a nice initiative but why would we publish our work on it if no one can see and judge it, except the 30 users? People do not go to the city hall to watch LommelTV. Furthermore, it is a place for the elite.”*

Having the perception that there is no audience out there is a major obstacle in the content creation process and needs to be given full attention by the research team in order to convince already inspired and motivated people to start generating content.

### **After content creation, before publishing**

It seems a logical process: after a user has made his content, he can not wait to publish it on LommelTV. This is rather different in the field. There are users who consider the quality of their movie clips as an important factor, technically as well as content-wise. In some cases, this will lead to a form of self-censorship:

*“Because there are only 50 users right now, you impose censorship on yourself. You think it is not good enough for LommelTV, you look at what is missing on LommelTV, so you can try to do it yourself. There are users who do not impose censorship on themselves and just do their thing. When their movie is uploaded, they are very proud of themselves, because everything you do yourself is always very good. I impose censorship on myself, not that it is not allowed, but that the movie is not good enough, e.g. the music. It is the same as on the internet, when I design a website I make sure there are no spelling mistakes for instance. It is a tendency I have.”*

### **Publishing**

Once a user is satisfied with the way his content looks, he is ready to publish it on LommelTV. Problems that can occur at that moment are mainly of a technical nature. The process of encoding and uploading the movie clips takes a lot of time, after the user has

already put a fair amount of time into editing the movie clips. This may in turn have an impact on his motivation.

### **Audience of non-LommelTV user**

Content creators need an audience. An audience will give them feedback and that feedback will help them to improve, alter or even remove their content. Even if they all have a perception of the audience that does not match reality, they need to know that there is at least a potential audience. From the point of view of the research project, one can ask: why ask people to make content for a digital local television channel if the majority of the citizens is left out?

This problem was pointed out by a number of users:

*User: "The problem for the non-participants is that they have to go to a place or room provided with a settopbox. It would be a lot easier if it is possible to watch it on the internet."*

*Interviewer: "Would you rather watch it on your pc?"*

*User: "Not me, but I can imagine that this is interesting for the public."*

*Interviewer: "Imagine that every citizen of Lommel can watch LommelTV, what would be the big advantage of this expansion?"*

*User: "More people will be interested in LommelTV that is what is going to happen. If you talk about LommelTV to others, you will easier find someone who understands what you are saying. This is not the case right now, because there are not enough people involved. You still have to promote it to the public."*

This attention point is a crucial one: not only can an absence of audience discourage the current users in generating content; ignorance of LommelTV in the daily life of citizens will inhibit new candidates to participate in LommelTV.

### **Feedback**

If users reach out to an audience, that audience needs to have the means to fulfil its powerful role: providing feedback. Concerning the virtual feedback, these means are technical. Up until now, only ratings are available as virtual feedback. First they appeared on a monthly basis on the public section of the website of LommelTV, now they are put, also monthly, in the private section that is only accessible by users.

*"It should also keep you motivated. For example, ratings keep you motivated. When the ratings are published, you know at short notice which movies are interesting. Maybe ratings after two weeks are more interesting because you can anticipate faster. I would insist that the ratings are automatically generated."*

There is a need to generate extra technical features that give feedback to the users. For example, a counter of the number of views on each movie clip is desired by most users.

Concerning the face-to-face feedback, it is clear that only a small group of users consider the LommelTV council as a meeting place between the users. The majority of users find the council a useful instrument in the research project, but do not feel the need to participate in it. One of the outcomes of the council is the initiative to organise a public screening event in Lommel. On an evening in December, citizens of Lommel are invited to watch short movies

about their city, whereby movie clips of LommelTV will also be shown. This will be a good moment for the users to get in touch with the public, receive feedback on their work and adjust their audience perception.

### **Installation threshold**

The last attention point is situated at the start of the psycho-social process of content creation: the installation threshold (Fig. 1). Although a number of people do not encounter any problems during set top box installation time, others are confronted with a series of installation issues. The preconditions of having internet close to the television and an internet connection that is fast enough are major obstacles related to the installation. This has without a doubt an influence on the motivation of the LommelTV aspirant user. Although a manual is provided, the concept of *do it yourself installation* is not quite successful. More technical support during the installation process should be provided.

### **Conclusion**

As a general remark we can state that the technical component of the application is a key facilitating element. However, the thriving forces behind these technicalities are the people participating in content creation. It is of crucial importance to keep them motivated and inspired throughout the development process. This may prove a greater challenge than the application's technical evolution.

Furthermore, in order to have a diverse set of people participating in the process of content creation it is pivotal to target technical as well as societal lead users. The latter possess a large social network complemented by a canny ability to motivate newcomers to have a go at content creation, without necessarily being technically savvy. This then implies the necessity of organising a series of workshops explaining how to film, edit and write a storyline.

Different initiatives should also provide visibility to a communityTV project. In this case the old-fashioned way of word-of-mouth is still a highly effective form of diffusion. When people are excited about using an application they are more likely to involve peers into the project.

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