



PROJECT SYNOPSIS FOR PARTNER SEARCH



## Concept

Our aim is to develop a compact monitoring device that can be installed additionally on public media interfaces, which is able to provide information about the displayed advertisement, and to give feedback about the obtained contact number and the pattern attributes.

A further objective is to gain detailed information about the composition of the sample, that means to define the age, gender of the people walking by and whether the person has noticed the advertisement.

The monitoring device will store the collected data (1. data group: information about the display unit, 2. data group: contact information), organize them on its own memory and automatically transfer to the central server.

Finally we would like to develop a software that is able to analyze the collected data present the results for the system owner (according to a day/week/month/year campaign). The system will enable the user to check the media device 0-24 h and send automatic alerts in case of a failure.

## Objective (detailed)

Our aim is to develop a monitoring device equipped with artificial intelligence that is able to monitor the given media display in 24 hours and count the people and objects that pass the display. The essence of ADMOS is that the media owner is able to check the status of the advertising device and the displayed creative anytime, secondly the system will count possible contacts. A further objective is to gain detailed information about the composition of the sample, that means to define the age, gender of the people walking by and whether the person has noticed the advertisement.

A further objective is to develop an intelligent software that automatically checks at certain intervals the status of the device and the creative and in case it differs from the default it sends a notification to the user. In order to this the endpoints of ADMOS are in constant connection with the operator. According to the concept the energy supply is provided by the device itself or its lighting system. There will be an extra option of using photovoltaic supply on demand.

We would like to construct the device in a compact design that can be easily mounted additionally on any outdoor display.

The system will have a double purpose:

First it offers opportunity for the board owner/ company selling advertising area to check whether the creatives have been placed properly, to check their condition during the campaign and the functional end aesthetic state of the display. Additionally it will enable the operator to log in on a secure website area and view all the displays in his own campaign 0-24 h.

Our system will furthermore be able to detect the objects passing the media device with the use of a complex technological solution that will be described later. These objects will be automatically classified by size, form, speed and so identified as car, bus, bicycle or something else. ADMOS will be able by computing the collected data to estimate the achieved contact number much more accurately than previous methods and give an evaluation about the effectiveness of a campaign by linking the contact numbers to time intervals. ADMOS will be able to carry out these tasks under extreme weather and bad visual conditions.



Finally our system will be capable of assigning personal features to the recorded samples (gender, age, visual contact), and so it will enable the advertiser a better exploitation of advertising surface because the user will know exactly which devices are the most effective to reach a certain target group. The ADMOS system will give attributes to each public media surface that will make them similar to TV, printed and on-line advertising forms in terms of predictability. The difference is that in the case of online and printed media we can only estimate the attributes of the reached group, ADMOS will give an exact answer to this question and while TV viewer ratings uses statistical methods to process a representative sample, ADMOS will measure 100 % of the real sample.

The ADMOS system will be composed of an outdoor unit and a software running on a server. The two will be connected through a GSM communication module. The outdoor unit will contain a waterproof housing, two cameras, a minimal hardware on demand and a GSM communication unit. According to the concept, the outdoor unit will only be equipped with control hardware if the control of the individual units not viable, not effective or expensive (data transfer) is.

## Innovation

1. Analytical software
2. Reliable contact counting in all environments, hardware solution for personalizing each contact (face recognition, aim: only minimal amount of data)
3. Integration of components
4. Secure and reliable data transfer
5. Compressing the information
6. Low commercial price
7. Minimizing the impact of the extreme outdoor conditions, to ensure stable operation

## Risks

We have to take some technical risks into account during the implementation of the project. On the other side there are risks threatening the commercial success of the product. We list these risks below and the referring contingency plans.

### Technical risks:

1. Efficiency and stability of wireless communication
2. Safety of communication system
3. Reliable operation of cameras and additional devices under the influences of the environment - In addition we cannot investigate all possible circumstances due to the geographical location of the partners (desert, arctic, extreme humidity etc.)
4. Protection against water and humidity
5. To keep the margin of error of the data analysis system within a +/- 3% range, this is difficult because of the variety of locations and the great number of possible disturbing factors
6. To filter out unnecessary information at the outdoor unit (to ensure we do not send this data nor store it in the device)

### Economic risks

1. To search for affordable components, or to manufacture the required parts employing external partners (not part of the project)
2. To keep the cost of the final product under the targeted threshold
3. To keep the operation costs of one or more units in one ownership at a low level (energy consumption, communication costs, maintenance)

Looking at the listed points we can state that the risks of the project does not reach the level that would seriously threaten the final outcome. However taking the size of the consortium partners in consideration the appropriate solution of the mentioned problems and risks together with further development plans requires an external support source.

## Usefulness beyond business goals

The ADMOS system is a solution for two actual problems on the media market. One of the biggest problems is that paper billboards represent the bigger number and percentage of media interfaces (in some EU countries reaching 85-90%). The installation of advertisements (creatives) is done manually by gluing the posters on the wall. According to it the removed creatives have to be eliminated as waste. (ECB száma) It is also a frequent case that due to improper gluing the poster peels off before the removal and so contaminates the environment (because of the toxic glue and ink). As the advertiser does not have the opportunity to check the actual condition of all the billboards in his ownership, the photo taken from the billboard at the placement is the only evidence by which he accepts the implementation. The media agencies and the billboard owners are in a similar situation, as the placement of posters is usually done by a subcontractor who can use lower quality glues or unskilled personnel at the same price without being in risk, because the procure (and other members) has very little opportunity to check the quality of the finished task. ADMOS is capable to carry out this constant monitoring, automatically notifying the user if there is a problem with one of the boards (e.g. the poster peels off). The user can instantly fix the problem, so providing a higher quality service and creating the opportunity to handle the material waste in an appropriate way. Furthermore ADMOS forces the billboard placing companies to comply with the protocol and deliver their task with the required quality materials and competent manpower.

Another problem that ADMOS has to face is missing trust against the public media segment. The reason for this trend is that until now the only way to measure the effectiveness of outdoor advertising was opinion polls and statistics. Furthermore proving the effectiveness of certain advertisement forms is the interest of the advertising sector, therefore these tests are mainly carried out by media companies, which questions the reliability of those measurements. Contrary to this ADMOS is suitable to objectively measure the effectiveness of an advertisement showing whether the display reaches the expected contact number or not. Based on this information the advertiser will be able to optimise the campaign more accurately and objectively. This will indicate in midterm that 15-20% of the current portfolio is ineffective and useless, since less material (poster, glue) is able to achieve the same result.

## R&D partners

University of Sheffield as face recognition expert  
MFKK Invention and Research Center Ltd as technical and hardware expert  
Central European Research Centre Ltd as software development expert