



# MOTION AND FACE RECOGNITION TO DETECT SUSPICIOUS ACTIVITY

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**Abstract:** Border surveillance is the most important task in the field of public defense and security. To maintain peace and to ensure safety of a country's people, the borders need to be kept under 24/7 monitoring. Especially, under current circumstances, when conditioning like terrorist infiltrations and illegal movement of both living as well as non-living beings have come common, it becomes of utmost significance to rigorously cover the border areas against similar conditioning.

**Keywords:** Border surveillance, monitoring, infiltrations, background subtraction, intruder

## I. INTRODUCTION

To check similar happenings on the border areas, the least that can be done is to give constant monitoring. In current script, this monitoring takes place manually by the border security forces which are responsible for continuously keeping an eye on the borders. It takes a lot of force and means as the borders are stretched across hundreds of long hauls and have extreme terrain as well as climatic conditions. Hence, the need of the hour is to design an automated border surveillance system which can perform the surveillance task without taking any mortal backing. It can exclude the need of planting humans at hostile conditions at all the times. also, in case if commodity suspicious is detected by the system, it must be suitable to take the necessary opinions and hence conduct along with issuing alert dispatches for the mortal regulators. The central control apartments can be set up at a distance from the border area. Once the mortal regulator is apprehensive of the intrusion, it's upon him to decide the coming course of action.

## II. MODULE IDENTIFICATION

**Scenario 1:** The implicit intruder (a beast) is on the other side of the border and cannot be detected by the PIR detectors but is in the camera's field of view. Note that implicit meddler then could be a mortal or a beast.

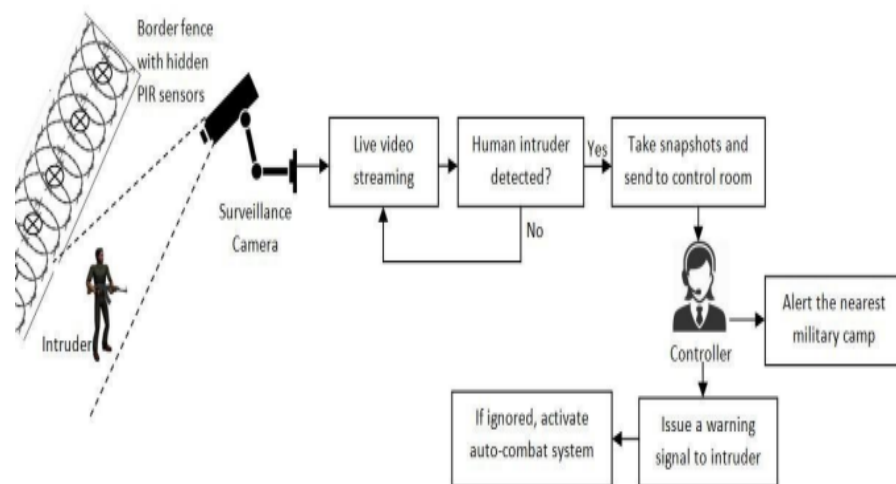
**Scenario 2:** The implicit intruder (Human being with weapon) is close to the border hedge and in the propinquity of the PIR detectors as well as in the camera's field of view.).

**Scenario 3:** The intruder (a beast) has crossed the border hedge and is still in the propinquity of PIR detectors as well as in the camera's field of view.

**Scenario 4:** The intruder (Human being) has crossed the border hedge and is still in the propinquity of PIR detectors as well as in the camera's field of view.

## III. SYSTEM ARCHITECTURE

The proposed system is a smart border surveillance system which can prove to be helpful for our border security forces. It's suitable to give round the timepiece videotape surveillance at the places where mortal deployment isn't possible due to geographical, climatic or some other reasons. Multiple pyro electric infrared detectors (PIR) are disguisedly installed on the border fencing which cover the border area for any intrusion.



**Fig 1: System Architecture**

#### IV. LITRATURE SURVEY

Intruder Detection by Extracting Semantic Content from Surveillance Videos: present a survey of wireless sensor networks for Border Surveillance and Intruder Detection. The aim is to devise a multi-sensing system which is developed by combining different techniques of surveillance and intruder detection, for varying border scenarios such as, flat surface movement or water-body movement. Different sensors for human intruder detection such as, geophone, hydrophone, infrared and surveillance cameras are discussed. Border Intruder Detection System: propose a model to study videos captured by surveillance cameras and extract features from it after converting video to shots. Basic features are extracted by employing an object tracking method based on ROI. At last, semantic content extraction results in recognizing the intruder without any false matching. Automatic Intruder Combat System: A way to Smart Border Surveillance: presents a framework which combines the human target detection, tracking and face-recognition based human identification for surveillance purposes. Background subtraction is employed for the detection of moving targets. Face recognition involves detecting the face of the target. If face detection fails, then target tracking continues

#### V. APPLICATION

The smart border surveillance system can't only help the defense forces to enhance the security of border areas but also can help save a considerable quantum of labor and means. It involves the use of advanced technology keeping in mind the cost effectiveness.

#### VI. ADVANTAGES

The online transaction system has made guests more effective and effective in their gesture and has driven businesses to new heights, forcing numerous to make the adaptations and changes necessary to reach a new request of knowledgeable consumers. The rapid-fire growth of e-auctions has led to an e-transformation in global retail structure. Thanks to a growing internet and advanced inflows and a more smart population, despite numerous obstacles. Secure online payments, good for electronic stores, return programs and instigative abatements help you understand the benefits of the transaction system.

#### VII. LIMITATIONS

Hardware cost and one time setup is needed.

#### VIII. FUTURE SCOPE

In future, we can design this system for use on a larger scale. As with fleeting time the technology is constantly perfecting, the system can be equipped with further advanced and sophisticated tackle. The propinquity detectors, object discovery medium and response medium, if made using state- of- the- art technology, can make the working of the proposed system indeed more accurate and time- saving.

## IX. CONCLUSION

The proposed system could be a great help in enhancing the security of our border regions especially, the areas facing extreme climatic or terrain conditions where mortal deployment is a major pitfall. Although the system may not be suitable to give advanced border security but can surely give results to border security surveillance on a small scale. As the system detects meddler, an alert communication is generated along with the transfer of the shot of the meddler to the main system. also, the applicable way are taken to exclude the trouble as the position of generation of the signal is also available.

## X. REFERENCES

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