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Talmon et al.

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(54) **METHOD AND SYSTEM FOR EFFECTIVELY PERFORMING EVENT DETECTION USING FEATURE STREAMS OF IMAGE SEQUENCES**

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(73) Assignee: **Agent Vi**, Rosh-Haayin (IL)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 846 days.

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(21) Appl. No.: **10/501,949**

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Assistant Examiner — Richard Torrente

(86) PCT No.: **PCT/IL03/00555**

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(57) **ABSTRACT**

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Method and system for performing event detection and object tracking in image streams by installing in field, a set of image acquisition devices, where each device includes a local programmable processor for converting the acquired image stream that consist of one or more images, to a digital format, and a local encoder for generating features from the image stream. These features are parameters that are related to attributes of objects in the image stream. The encoder also transmits a feature stream, whenever the motion features exceed a corresponding threshold. Each image acquisition device is connected to a data network through a corresponding data communication channel. An image processing server that determines the threshold and processes the feature stream is also connected to the data network. Whenever the server receives features from a local encoder through its corresponding data communication channel and the data network, the server provides indications regarding events in the image streams by processing the feature stream and transmitting these indications to an operator.

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H04N 7/18 (2006.01)
H04N 7/12 (2006.01)

(52) **U.S. Cl.** 348/155; 375/240.08

(58) **Field of Classification Search** 348/154,
348/155; 375/240.08

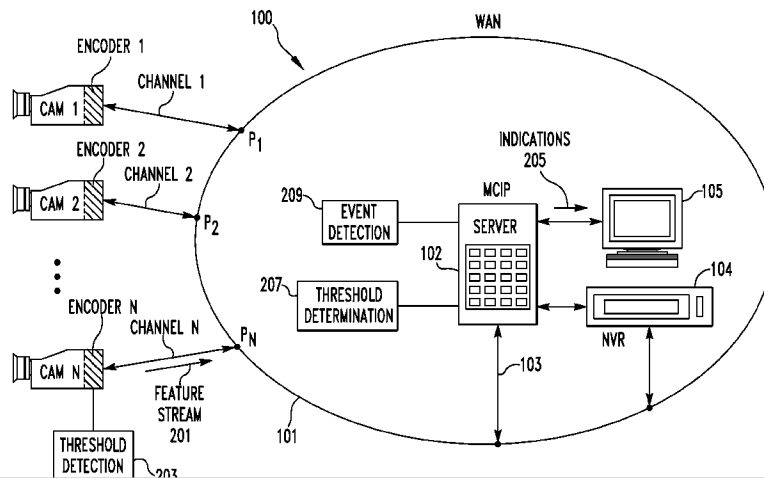
See application file for complete search history.

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58 Claims, 5 Drawing Sheets



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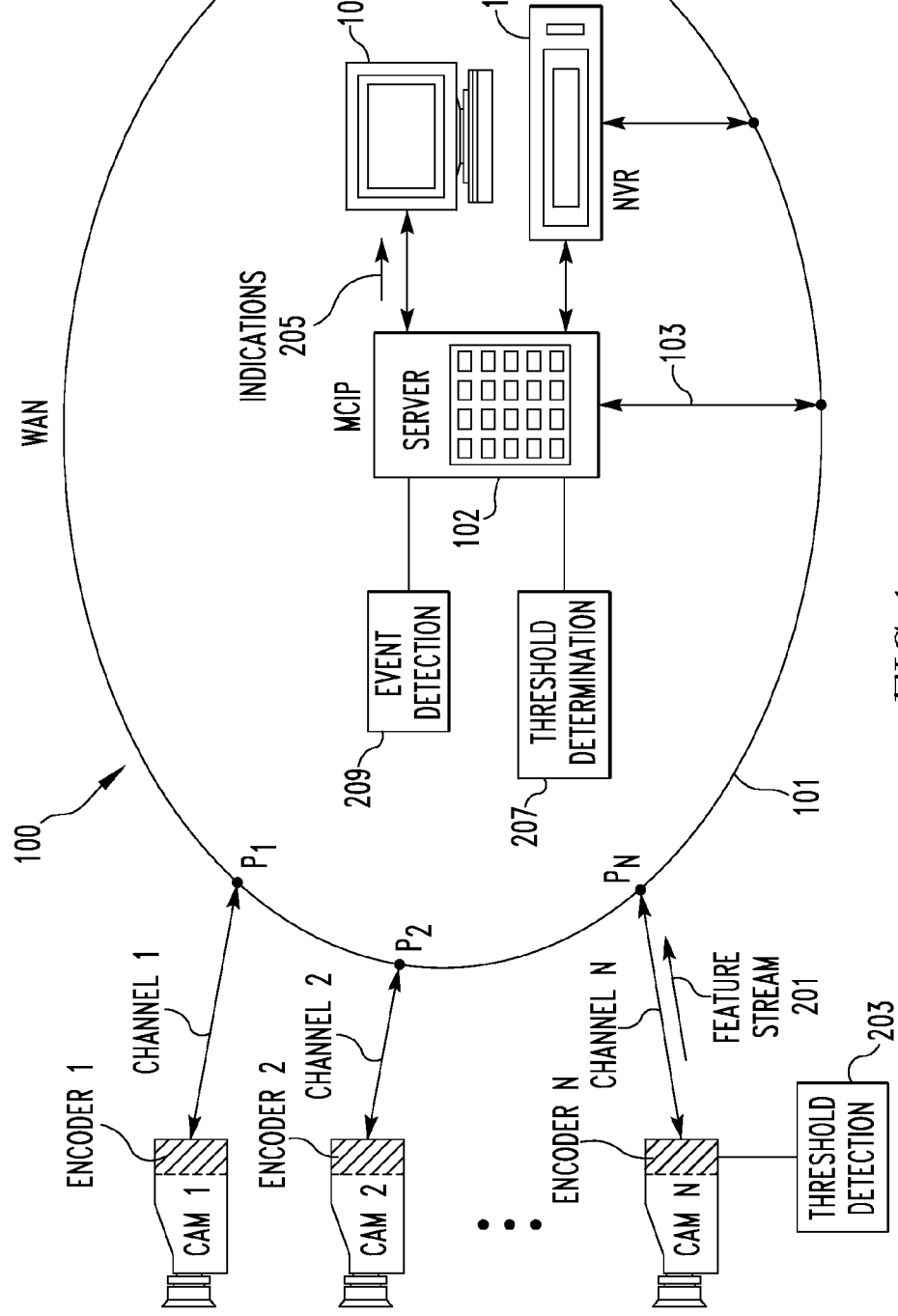


FIG. 1

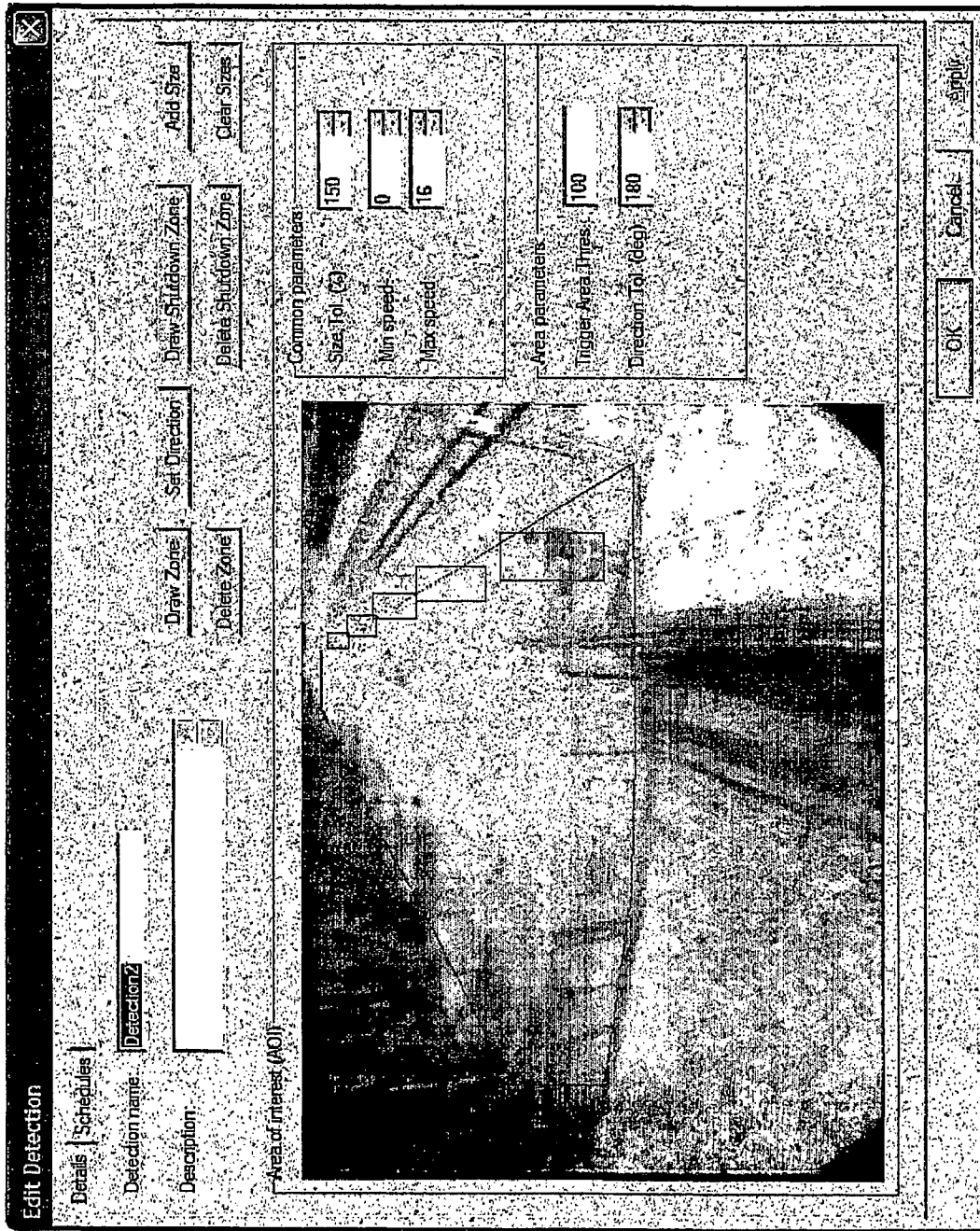


Fig. 2

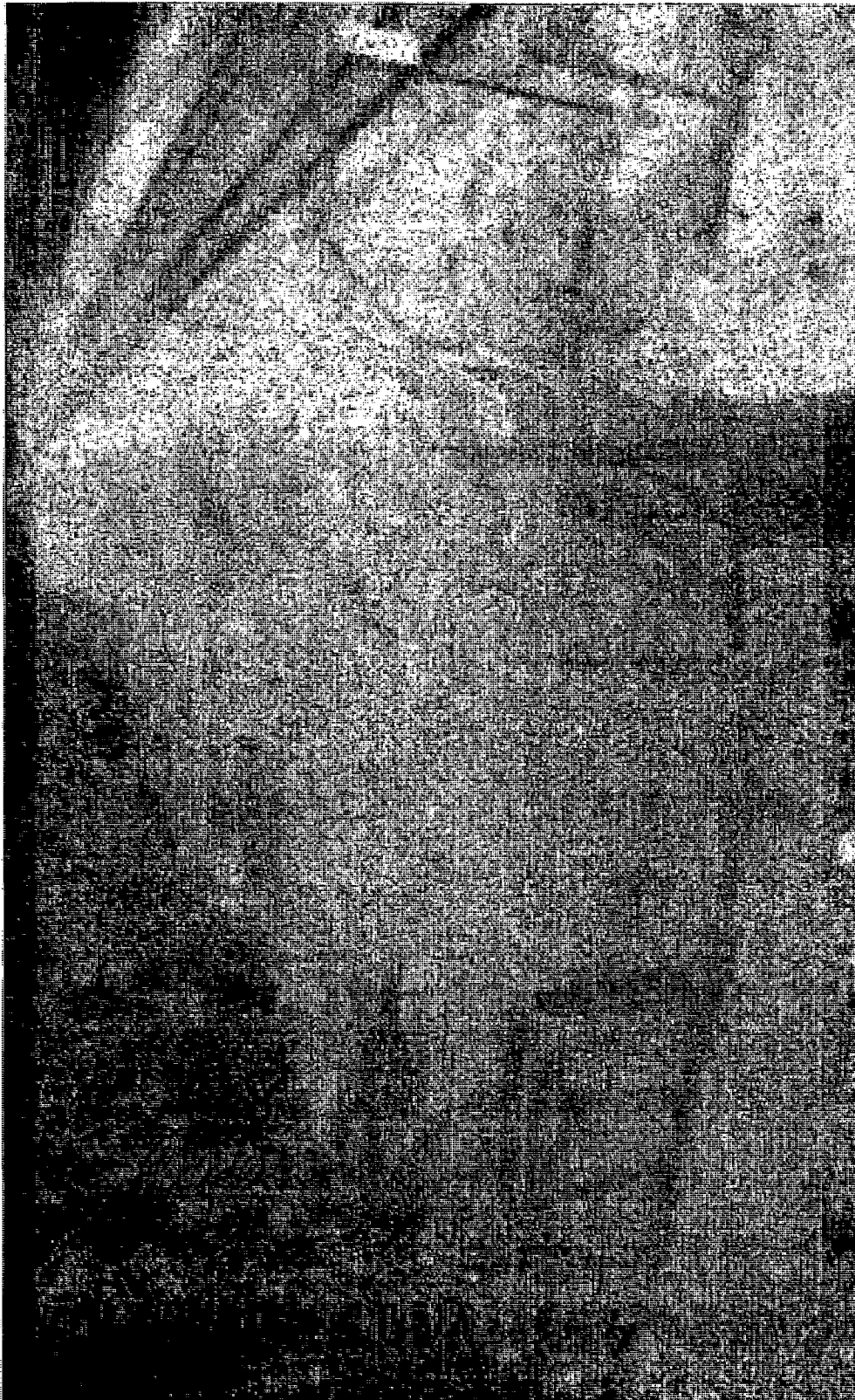


Fig. 3A

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