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EXPERIMENTAL BIRD COUNTING WITH A REAL-TIME COMPUTER

1. The aim of the project is to inform the pilot and all interested agencies about the up-to-date bird intensity at any moment and in any area within the Radar-coverage. The intensity will be communicated using the 0 to 8 scale (B.S.C.E.-Convention).

The night-finder is available at the same radar-site.

This can be done in the following way :

- a. Count the primary plots in a pre-planned sector.
- b. Find the relation between the number of primary plots in a square kilometer and the intensity of the birds in this sector.  
This can be done by taking photos of the scope (mentioning time and date) during the counting (several months are needed to become valid results).

2. A solution has been searched in such a way that there are no disadvantages for ATC operations and no modifications of the existing equipment are needed.

This solution is a pure software solution and consists of :

- a. A programchange in Radar Plot Reception. This change consists in extending the program. The purpose of the extension is the selection and the counting of the primary plots which are conform to the gate criteria, and the output of the result each radar revolution.
- b. A change in keyboard program.

The main purposes of this programchange are :

- activate and stop the counting
- input of the gate via the rolling ball
- calculate the surface of the gate

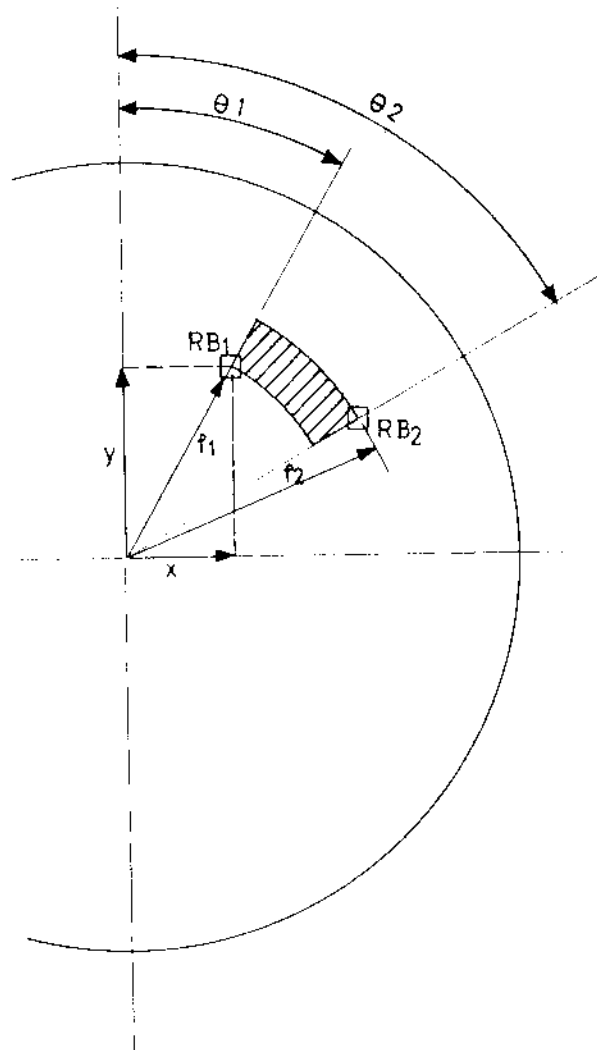
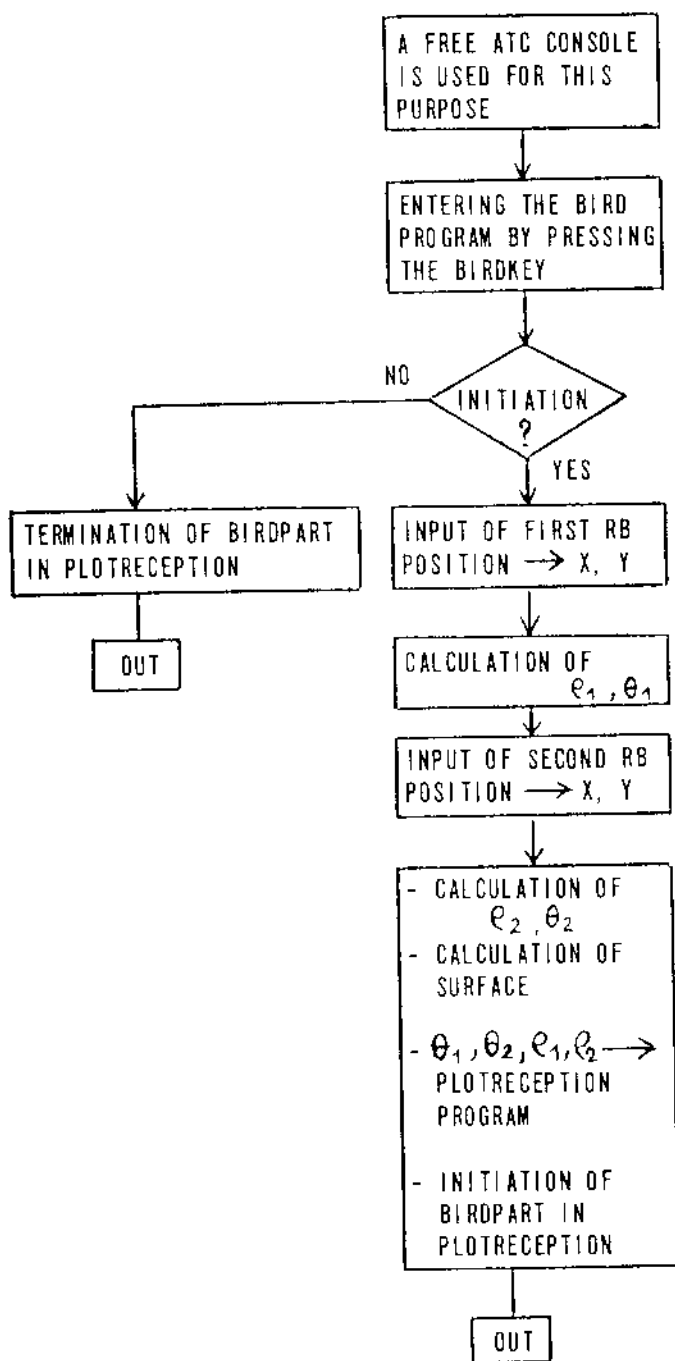
3. At this stage of the experiment it is possible to count the primary plots in a predefined area (which was determined by the rolling ball).

The further development is as follow :

- a. Calculate the surface of the imputed sector in which the plots are to be counted
- b. Printing of the results on the operator's console each radar-revolution.

4. The execution of this program is possible at all consoles at the same time. normally one console shall be used for this purpose.  
The drawings in annex will help to understand the working of the system.

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Lt v/n Vlw



□ RB : Rolling Ball

↳ Gives the X, Y position in relation to the radar station

$$e = \sqrt{x^2 + y^2}$$

$$\theta = \text{arctg} \frac{y}{x}$$

PLOTRECEPTION

BSCE/10 WP/12

$\left. \begin{matrix} \theta \\ e \end{matrix} \right\}$  SPECIFICATIONS OF INCOMING PLOT

