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AS-70 AS-14 26 July 1946 Paper by Lt. Dixon on Maximizing Flags and Rectangles Electrically

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1. In general, this paper is an excellent presentation of a subject that has potentialities for future trends in cryptanalytic techniques. Although at present there is no immediate operational need for the proposed equipment, it is felt that from the standpoint of continuity in cryptanalytic research it would be well worthwhile to consider this system, and perhaps at a future date to construct and test the applications of this equipment, and determine the accuracy and facility which can be attained by these methods. A possible operational application may arise if the Bourbon non-Morse problem turns out to be similar to the Fish systems.

2. With reference to paragraph 7 in the comments by Dr. Joos, 975 switches would be required to accommodate 50 gradations, and 1950 switches would be necessary for 63 gradations: this would require quite a little time in setting the switches, plus the time required for checking the arrangement. Furthermore, since even in the best of resistors there is a usual discrepancy of 1-2% (except in specially calibrated varieties, which would also have to be maintained at constant temperatures), the accuracy of resistor circuits may be questioned. A possible alternative is to record the basic data on 6-holed Baudot tape which would accommodate 64 categories, and incorporate a seventh hole to indicate the polarity of the categories.

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1. paper on Maximizing Flags by Dixon
2. paper by Mr. Ferner
3. " " Mr. Jacobs
4. " " Dr. Joos

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