

614 956  
604956

1

COPY 1 OF 4-2  
HARD COPY \$ . 1.00  
MICROFICHE \$ . 0.50

COGWHEEL: A FILM STORY OF  
SYSTEMS RESEARCH LABORATORY'S ACTIVITIES

Robert L. Chapman  
and  
Milton G. Weiner

21 September 1955 P-753

Approved for OTS release

COGWHEEL: A FILM STORY OF SYSTEMS RESEARCH LABORATORY'S ACTIVITIES

↓  
"Cogwheel" is a 30-minute sound film that shows a 40-man Air Force crew operating an air-defense direction center in the Systems Research Laboratory at The RAND Corporation. It traces the development of the Cogwheel crew as an organization, illustrates the complexities of direction-center operations, brings out some of the problems of studying systems in a laboratory, and demonstrates the realism in human behavior and environment building that can be attained in laboratory studies of this kind.

↑  
The Cogwheel crew is both a group that runs the station and an organization that is learning to do its job better. The film begins by sketching typical direction-center activity—tellers give position reports from their radar scopes, plotters are at work behind a large vertical movement board, the movements-identification section identifies a track as unknown, a director vectors an interceptor.

But the station is not a real one—the film points out that it is set up in a laboratory where scientists are studying the actions of the crew. After brief shots of some of the experimenters at work, the crew is seen as they discuss their first day's operations, aided by the training reports prepared by the experimenters to help the crew see where it has made its mistakes. The emphasis here is on RAND's interest in finding out how the Cogwheel crew works so that the performance of other air-defense crews and other organizations can be improved.

Then the film shifts back to the station to identify the early-warning stations and the air-surveillance officer and to enlarge on the earlier explanation of the movements-identification section's job and the duties of the senior director.

After this further explanation of air-defense, station scenes alternate with brief crew discussions to illustrate details of the station's operation and to show how the discussion that follow each period of operation give the whole crew a chance to work out changes in procedures. The crew's increasing ability to handle heavier loads and to identify and correct its shortcomings show its continuous development as an organization.

• A final station sequence in which the crew deals with several hostile attacks—from initial detection and identification through the senior director's order to "pounce"—is followed by a brief conclusion that brings in the experimenters again and points out Cogwheel's part in a detailed study of organizations.