

# COMPUTING ARRIVAL TIMES OF FIREFIGHTING RESOURCES FOR INITIAL ATTACK

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A national forest or planning unit consists of a variety of valuable assets to be protected by local fire agencies. In addition to these valued assets, and because of their importance to us, we have provided public road systems and firefighting resources.

The dispatcher of these resources to local fires must make instantaneous or precalculated decisions when a fire occurs in a given area. On smaller protection units, or those with few resources, travel times and resource availability are usually quickly available from personal knowledge, or from inspection of maps and other fire planning aids. If several protection agencies and many alternative resources are involved, choosing the "right" units for a particular fire dispatch is more difficult and time consuming.

This report describes a computer model for computing arrival times of firefighting resources for an initial attack on a fire. The model was developed to assist the fire dispatcher with the allocation of available resources quickly and efficiently.

The model requires a low-speed interactive terminal, available 24 hours, which the dispatcher can use to request a computerized list of possible resource arrivals on any fire within his area of responsibility. The resources are listed in order of arrival times, allowing the dispatcher to choose one or more resources to the fire location. The actual selection of resources from the listing will depend on local fire conditions and resource availability.

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Dispatching of firefighting resources requires instantaneous or precalculated decisions. A FORTRAN computer program has been developed that can provide a list of resources in order of computed arrival time for initial attack on a fire. The program requires an accurate description of the existing road system and a list of all resources available on a planning unit.

*Retrieval Terms:* Fire management, fire suppression programs; computer programs; simulation; travel time.

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