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Madany et al.

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(54) **METHODS AND APPARATUS FOR PACKAGING A PROGRAM FOR REMOTE EXECUTION**

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(58) Field of Search 709/328, 332, 709/217, 219; 717/165, 166, 167, 107, 106

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(57) **ABSTRACT**

A task executing at a server receives a request to package program code for remote execution on a client, and determines the software components that already reside at the client. The task uses this information to formulate a set of instructions to another task that creates the package. The created package is transmitted to the client, and program execution begins.

30 Claims, 8 Drawing Sheets
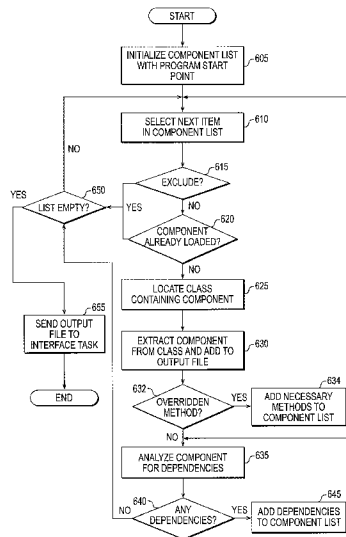
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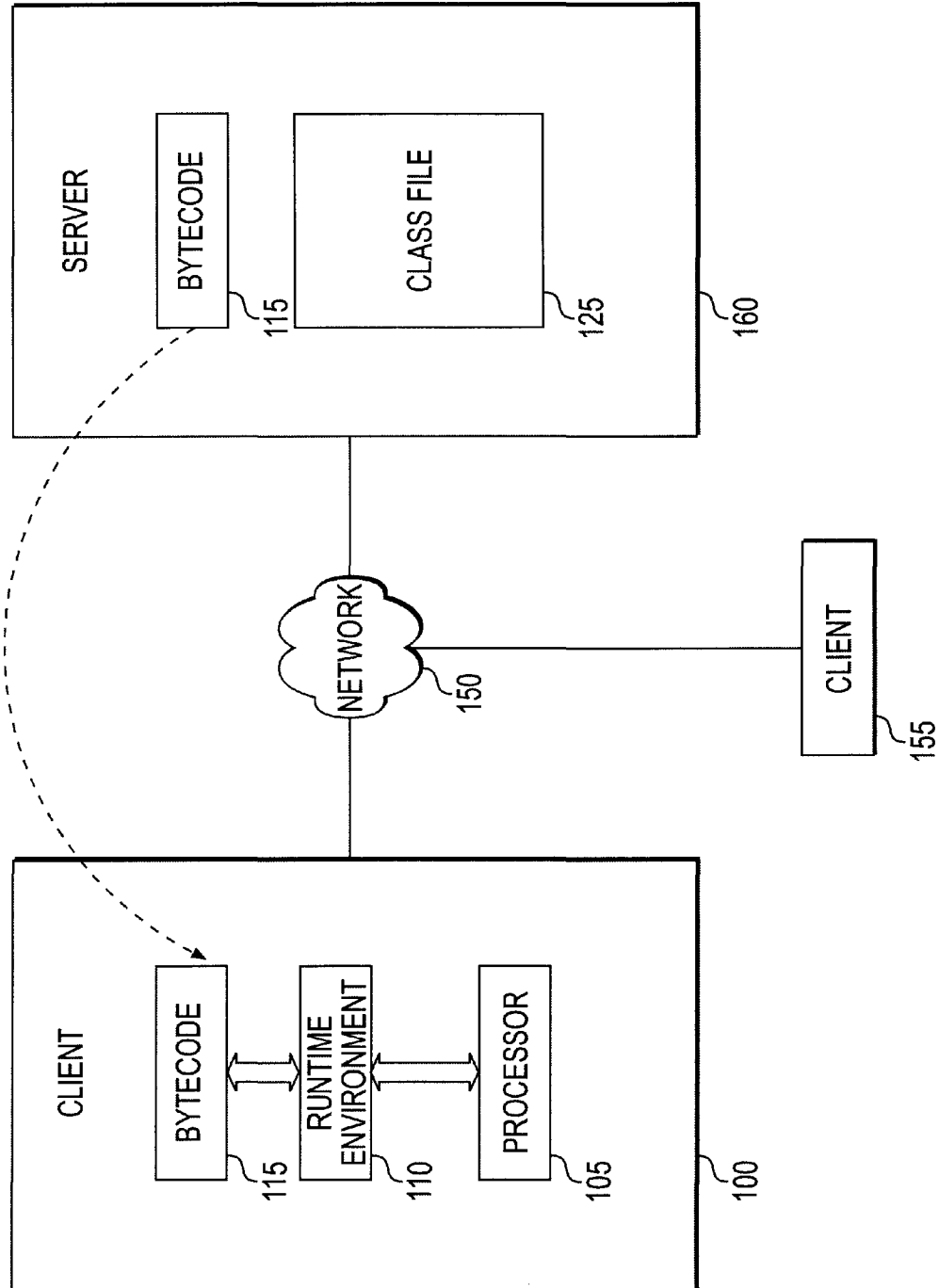
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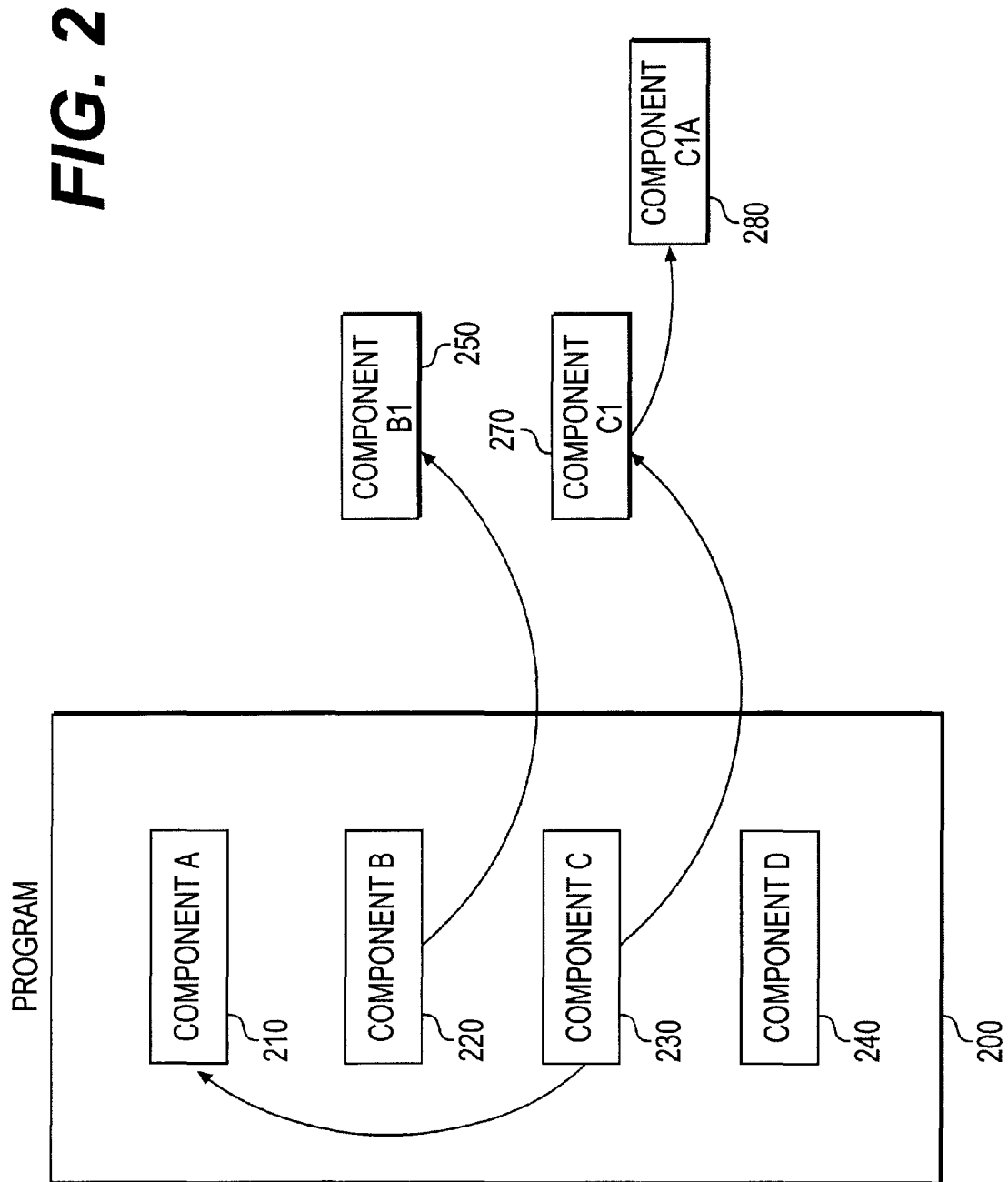
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FIG. 1

SERVER

BYTECODE 115

CLASS FILE 125

160

NETWORK 150

CLIENT 155

CLIENT

BYTECODE 115

RUNTIME ENVIRONMENT 110

PROCESSOR 105

100

FIG. 2

USER
ISSUES
REQUEST
TO
EXECUTE
PROGRAM

DETERMINE
WHAT
COMPONENTS
AND
DEPENDENCIES
ARE NEEDED

BEGIN
EXECUTION

COMPONENT A
REFERENCED

310

320

340

360

330

LOAD ALL
NEEDED
COMPONENTS
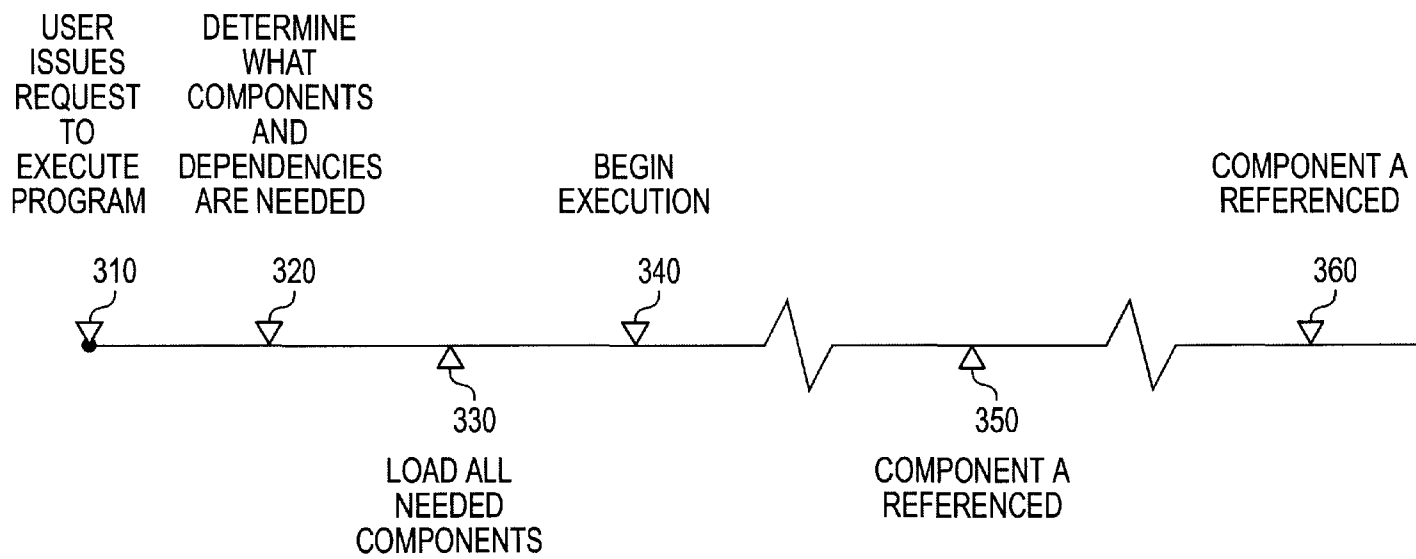
350

COMPONENT A
REFERENCED

FIG. 3

DOCKET ALARM

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