

Team Project: A Surveillant Robot System

Functional Analysis

Little Red Team

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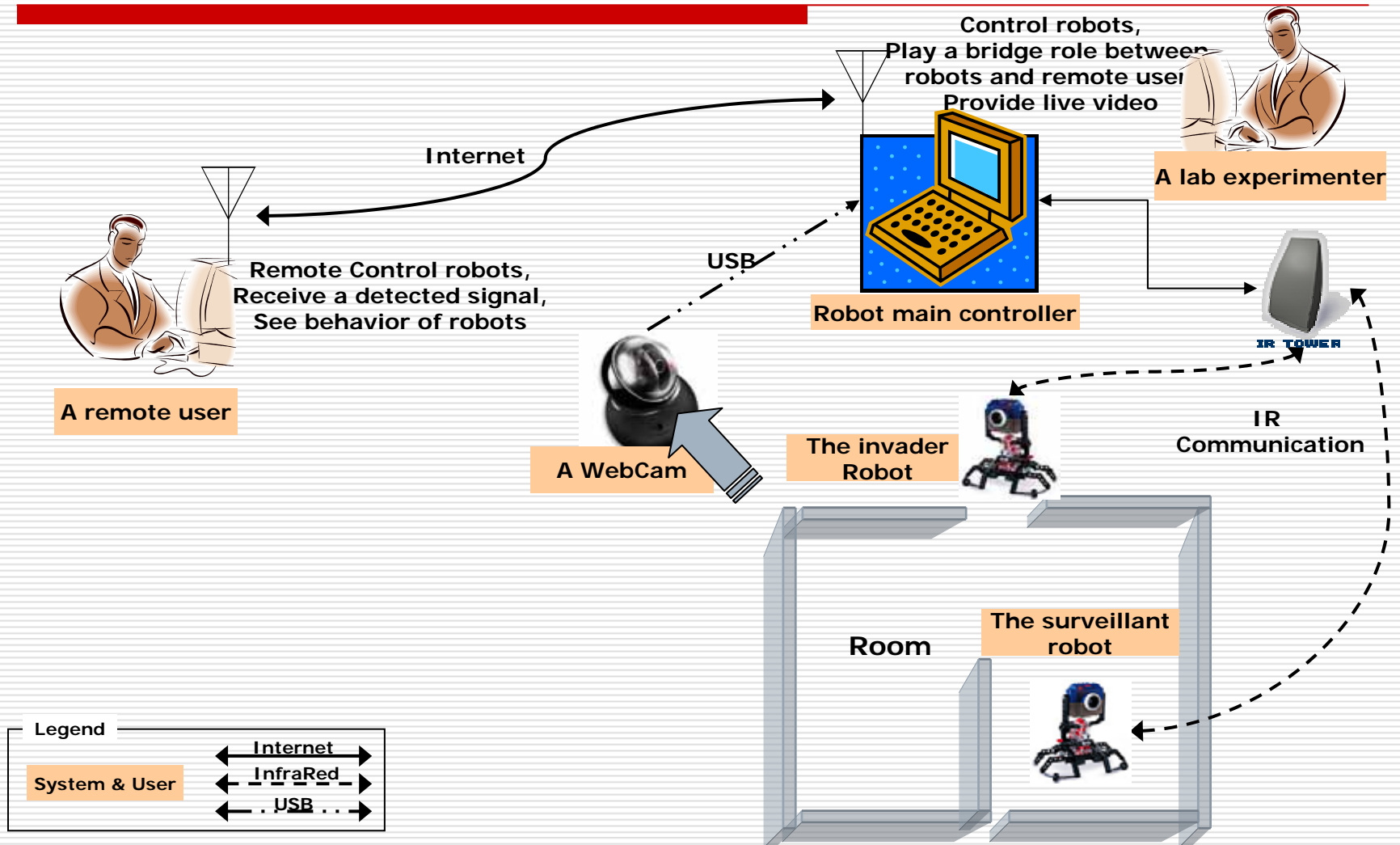
Chengzhou Li

JunMei Li

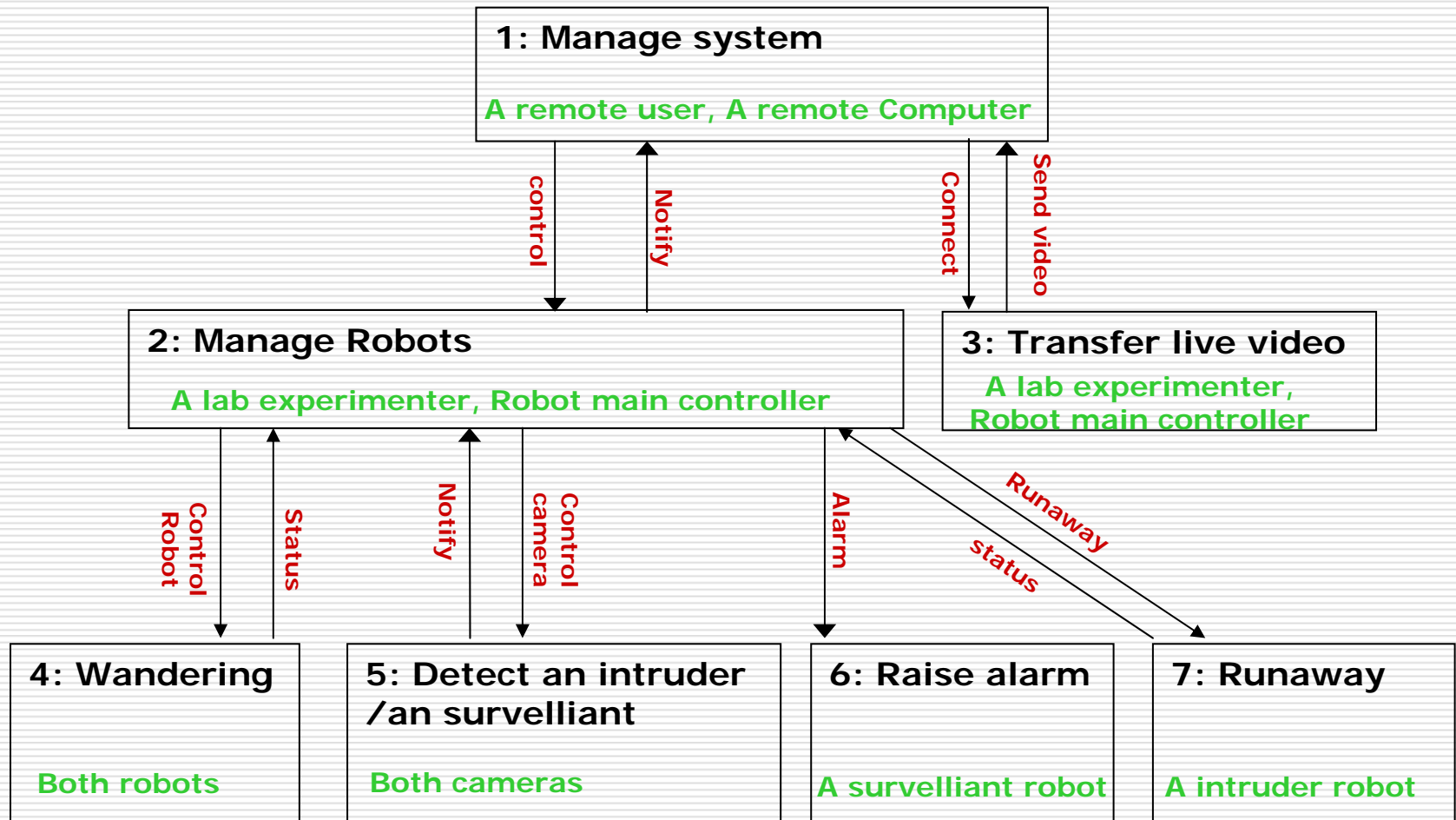
Kai Lin



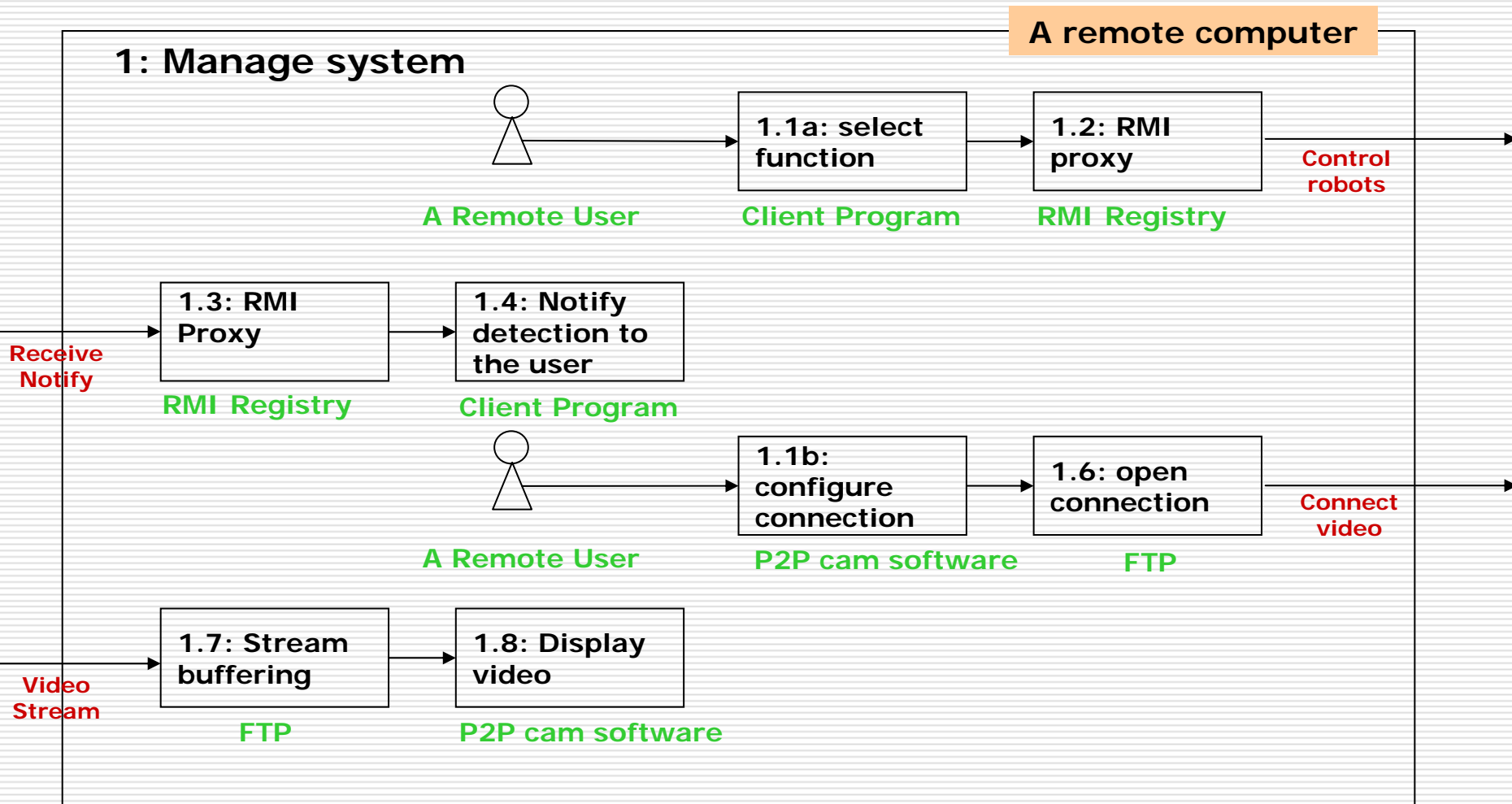
System Overview



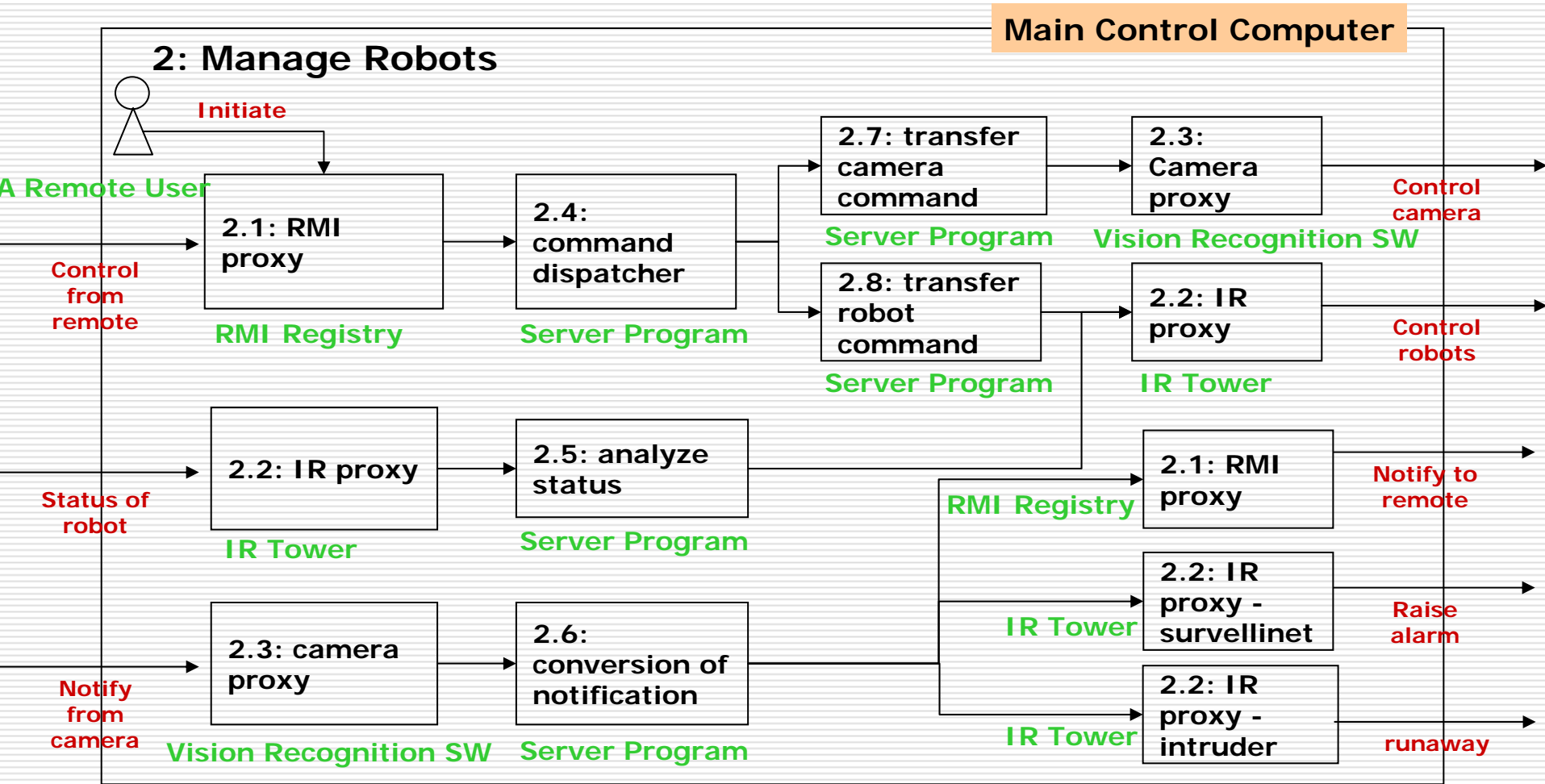
Top-level function



2nd-level functions (1/7)



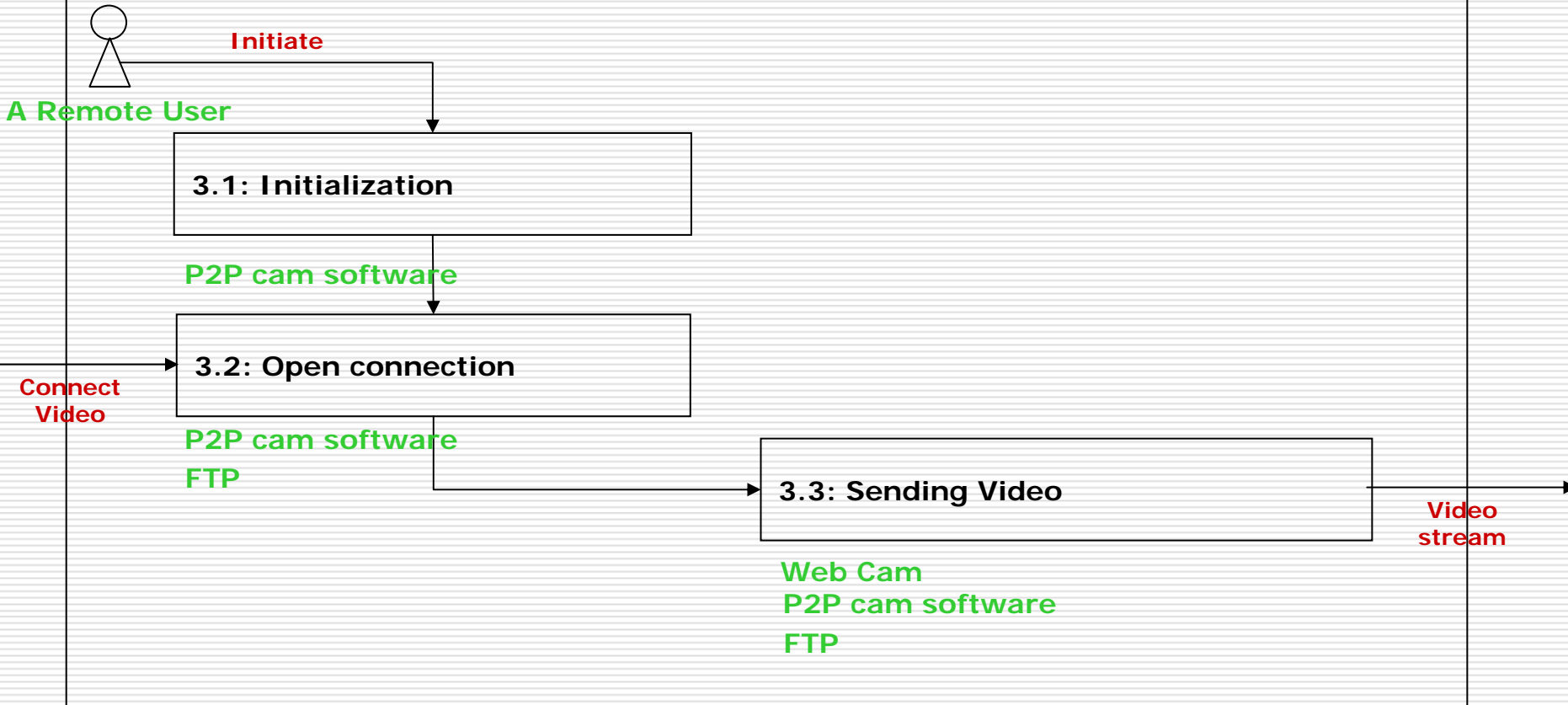
2nd-level functions (2/7)



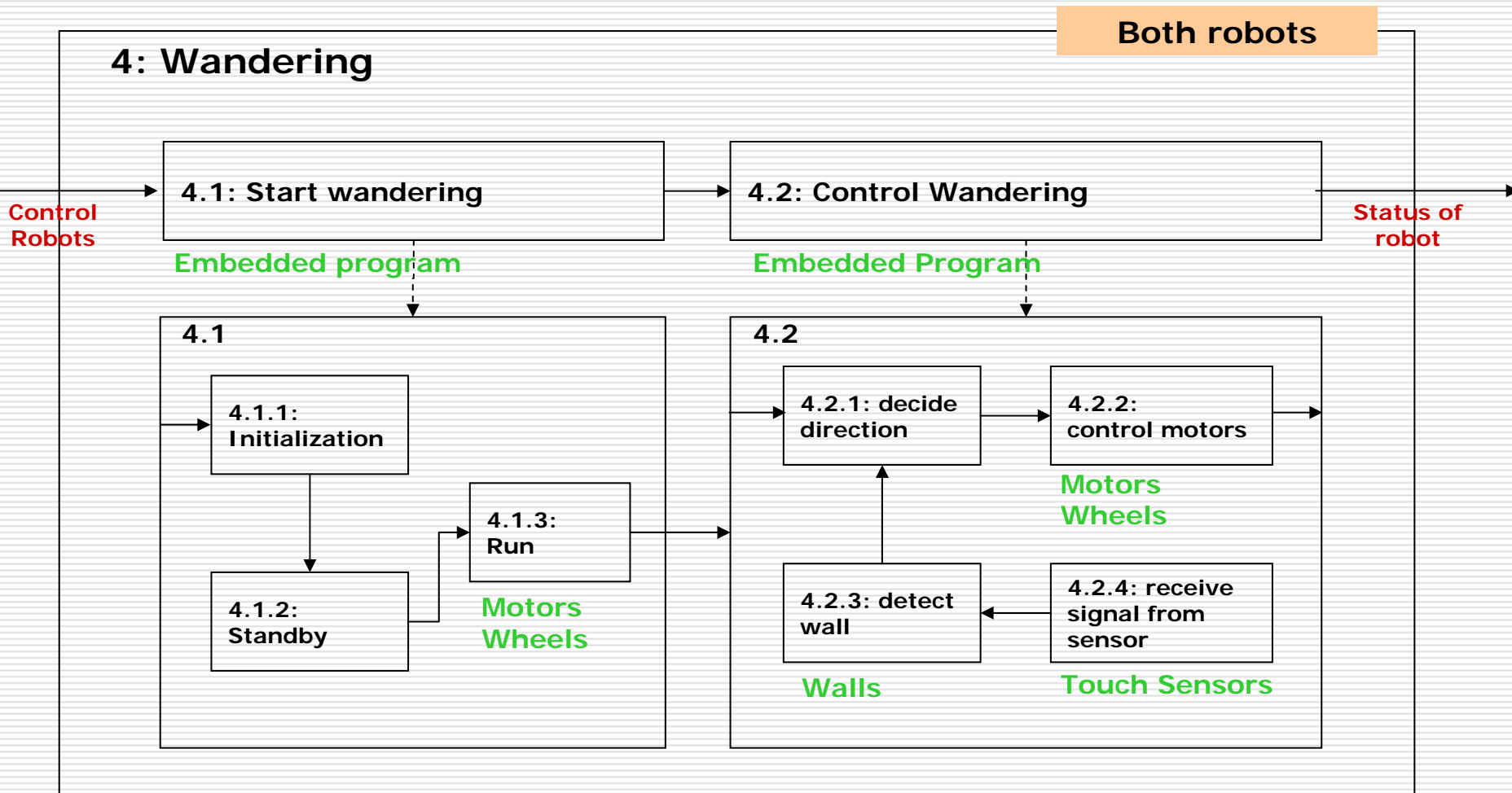
2nd-level functions (3/7)

Main Control Computer

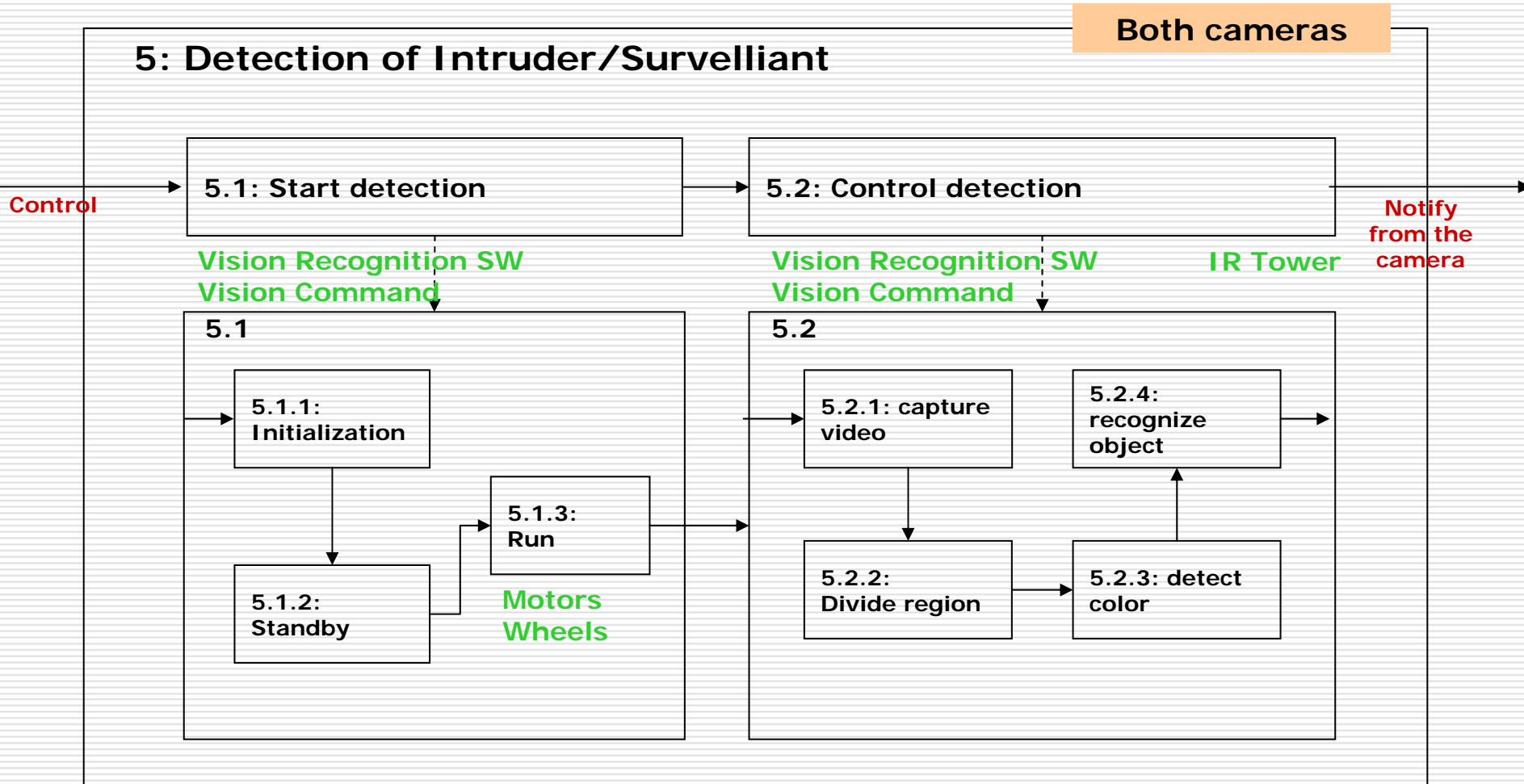
3: Transfer live video



2nd-level functions (4/7)



2nd-level functions (5/7)



2nd-level functions (6/7)

A surveillant robot

6: Raise alarm

Alarm

6.1: IR Proxy

IR Tower

6.2: Raise alarm

Embedded program
Sound device

7: Runaway

Intruder robot

runaway

7.1: change runaway mode

IR Tower

7.2: start runaway

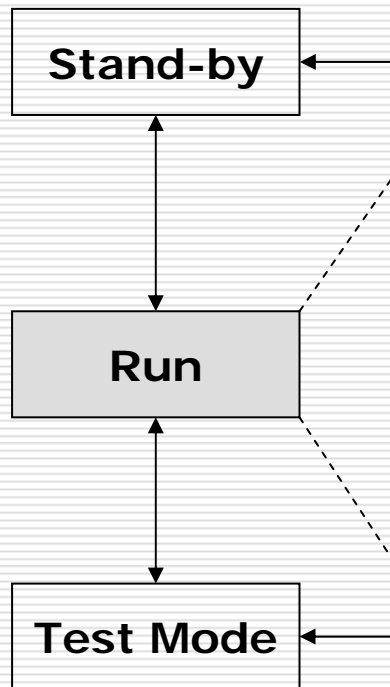
Embedded program
Motors
Wheels

Status

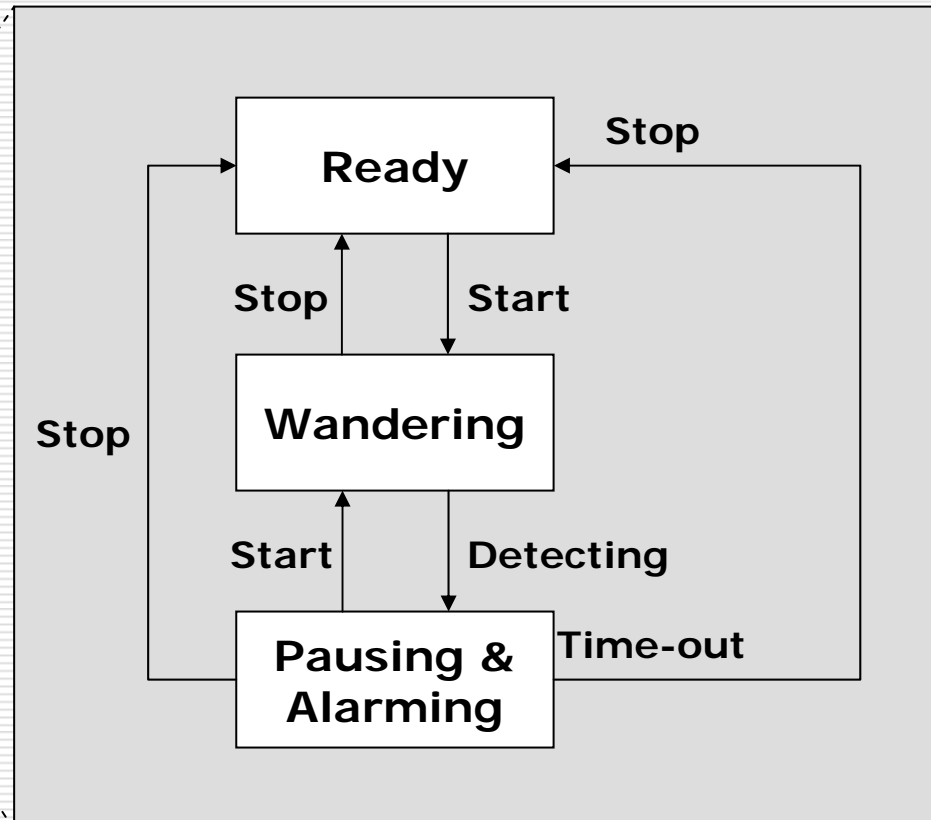


States and Modes - 1

Modes of both robots

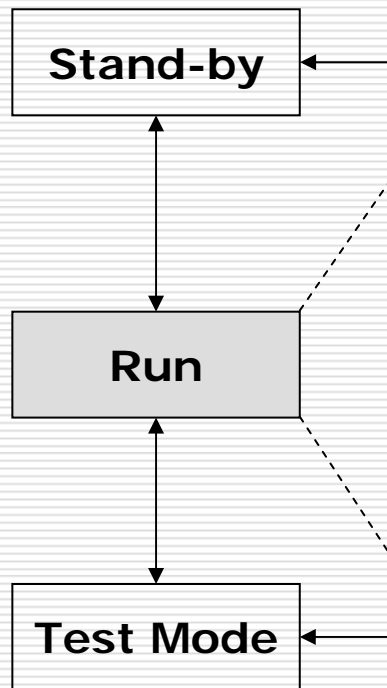


States of surveillant robot

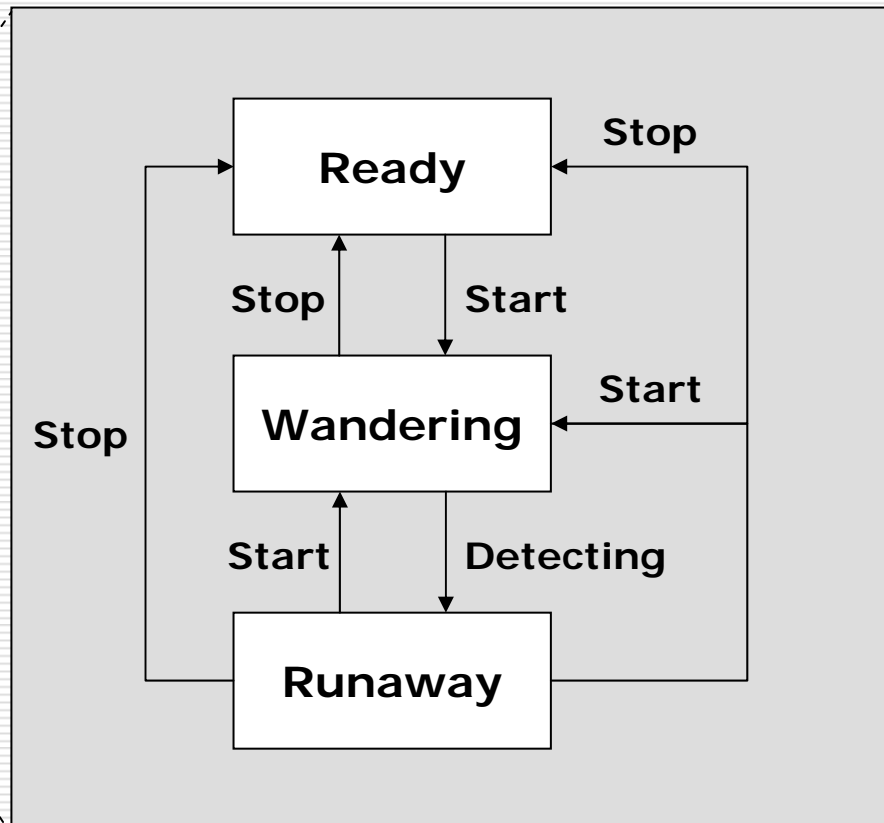


States and Modes - 2

Modes of both robots



States of intruder robots



Functional Architecture

