

# **Firesat Example Document**

## **Development**

**Prepared by**

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# Firesat Overview

A description of the work breakdown structure of an example forest fire detection satellite system. The system is described in OML and this document aims to present the details held in vocabulary.

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# 1. Organizations

In this system, there are various organizations providing support. Listed below are those organizations along with their supporting employees.

## 1.1. Boeing

Boeing is one of the organizations involved in this satellite system.

## 1.2. Curtiss Wright

Curtiss Wright is one of the organizations involved in this satellite system.

## 1.3. JPL

JPL is one of the organizations involved in this satellite system.

## 1.4. Lockheed Martin

Lockheed Martin is one of the organizations involved in this satellite system.

## 1.5. NASA

NASA is one of the organizations involved in this satellite system.

**Table 1.1. NASA Worker List**

<b>Name</b>	<b>Role</b>
John A.	Project Manager
Bob F.	System engineer
Bob F.	System architect
Luke S.	System engineer
Luke S.	System architect
Paul N.	System engineer
Paul N.	System architect
Harry P.	System engineer
Harry P.	System architect

## 1.6. Northrop Grumman

Northrop Grumman is one of the organizations involved in this satellite system.

## 1.7. Raytheon

Raytheon is one of the organizations involved in this satellite system.

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## 2. Programs

Programs related to the fire satellite and their respective projects

**Table 2.1. Program List**

**Program**

Earth Science Program

**Table 2.2. Earth Science Program's Projects**

**Project**

FireSat Project

**Organization**

NASA

**Mission**

FireSat Mission

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## 3. FireSat

### 3.1. FireSat Mission

The FireSat Mission pursues Forest Fire Detection, which has the objective: Reduce impact of forest fires on recreation and commerce in the United States. The FireSat project operates in these environments:

**Table 3.1. FireSat Enviroments**

**Environment**

Stars

Space debris

Sun

Endoatmosphere

The stakeholders of this mission are:

**Stakeholder**

US Forest Service

### 3.2. FireSat Project

The FireSat project deploys multiple work packages in pursuit of the FireSat Mission. These work packages contain data on the products needed for this project and describes how these products should be built.

**Table 3.2. Main Work Packages**

Work Package	Supplies	Providing Organization
WP05	Payload System	JPL
WP06	Spacecraft System	JPL

Some work packages authorize other work packages to further break down the work and details needed to supply a certain part. These sub work packages often deal with subsystems that make up the whole system that the main work package focuses on. The following sections go over the main work packages and note any sub work packages.

#### 3.2.1. WP05

WP05 focuses on Payload System and is the responsibility of JPL.

#### 3.2.2. WP06

WP06 focuses on Spacecraft System and is the responsibility of JPL.

**Table 3.3. WP06's Sub Work Packages**

Sub Work Package	Supplies	Providing Organization
WP06.04	Structures and Mechanisms	Boeing



<b>Sub Work Package</b>	<b>Supplies</b>	<b>Providing Organization</b>
WP06.05	Thermal Control	Boeing
WP06.06	Electric Power System	Raytheon
WP06.07	ADCS and GNC	Northrop Grumman
WP06.08	Propulsion	Lockheed Martin
WP06.09	Communications	Boeing
WP06.10	Command and Data Handling	Curtiss Wright