


Date	19 September 2022
Team ID	PNT2022TMID23611
Project Name	PROJECT-Emerging Method for early forest fire detection
Maximum Marks	4 Marks

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Emerging Method For Early Forest Fire Detection

The problem with forest fires is that the forests are usually remote, abandoned/unmanaged areas filled with trees, dry and parching wood, leaves, and so forth that act as a fuel source. These elements form a highly combustible material and represent the perfect context for initial-fire ignition and act as fuel for later stages of the fire. The fire ignition may be caused through human actions like smoking or barbeque parties or by natural reasons such as high temperature in a hot summer day or a broken glass working as a collective lens focusing the sun light on a small spot for a length of time thus leading to fire-ignition. Once ignition starts, combustible material may easily fuel to feed the fires central spot which then becomes bigger and wider. The initial stage of ignition is normally referred to as "surface fire" stage. This may then lead to feeding on adjoining trees and the fire flame becomes higher and higher, thus becoming "crown fire." Mostly, at this stage, the fire becomes uncontrollable and damage to the landscape may become excessive and could last for a very long time depending on prevailing weather conditions and the terrain.



PROBLEM STATEMENTS

PROBLEM
To find different methodologies to detect forest fire

Key rules of brainstorming

To run a smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes



3

Group ideas

Take turns sharing your ideas and grouping the most related ideas. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

CATEGORY1

Satellite constellation

optimal remote sensing

wireless sensor network

alarm system

CATEGORY2

watch towers

automatic drone routing

optical smoke sensor

thermal day light camera

CATEGORY 3

data size technique

spotter planners

detection using unmanned serial system

education through the watch

Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

