



Mitigating the Effects of Disasters by Using UAV

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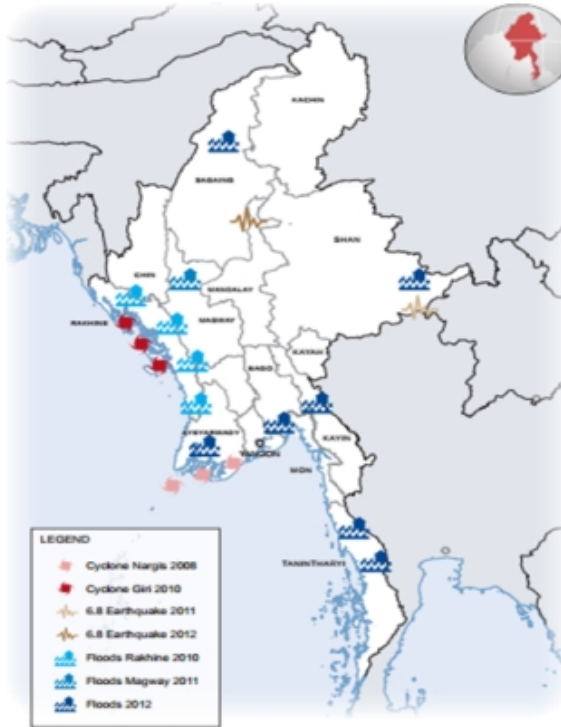


Natural Disaster



- Encounter around the world
- Occur any time & any where
- Cause loss of life, injury, or property damage
- Become important issue for developed & developing countries

Natural Disaster In Myanmar



2002-2012



Three cyclones affected over
2.6 million people.



Floods affected over
500,000 people.

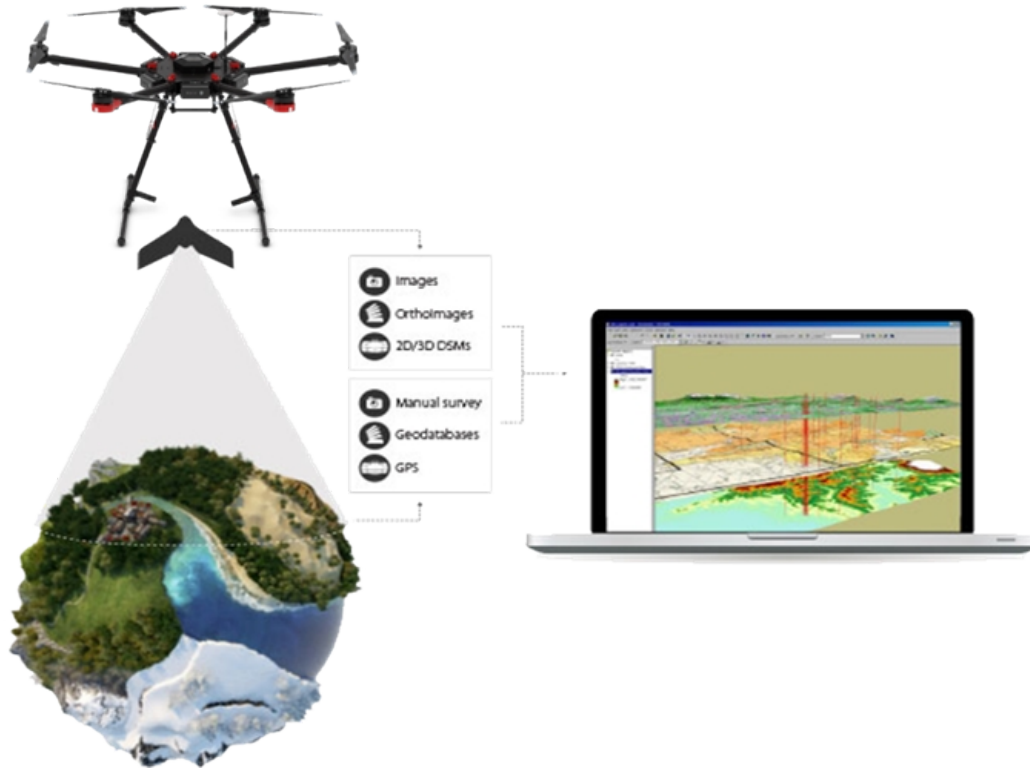


Two major earthquakes affected
over 20,000 people.

Cyclone Nargis that occurred in 2 May 2008

- 2.4 million people
- 37 townships
- US \$4,000,000

Application of UAV



Becomes a new paradigm

- To survey the affected area
 - To assist in establishing the communication network
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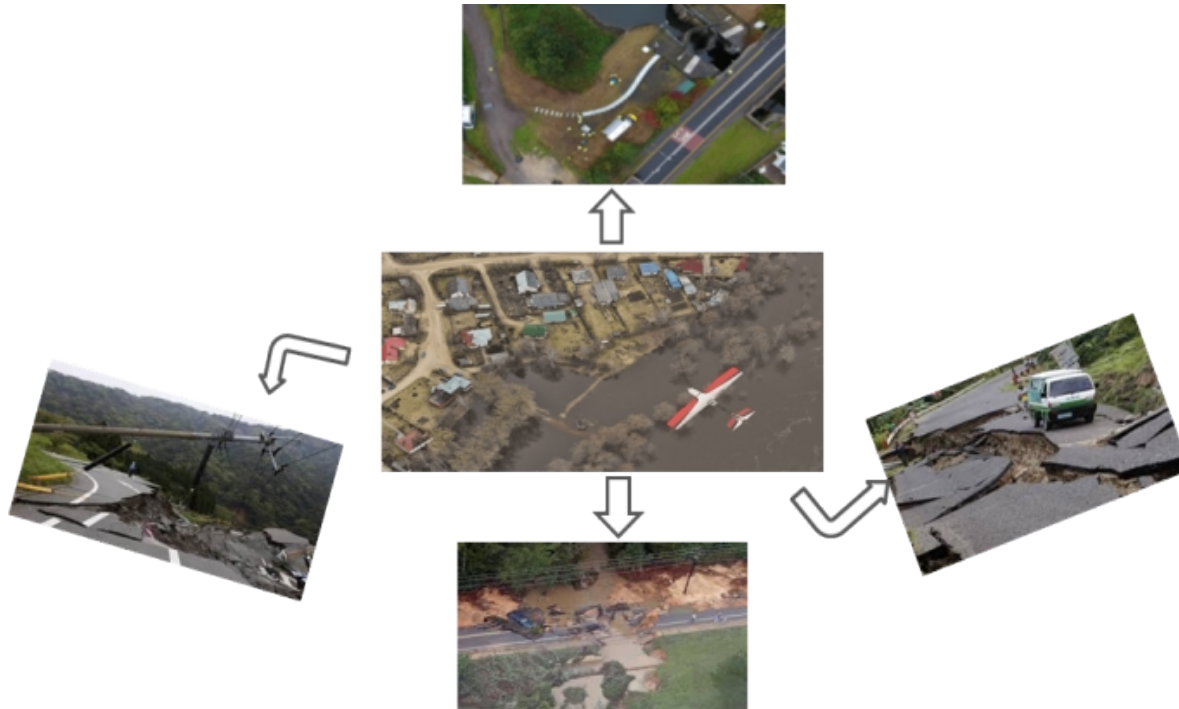


Using UAV in Emergency Response Management



- To have access to disaster struck areas that are not accessible
- To capture the information and make informed decisions
- To provide urgent and critical life saving process

Important Role of Transportation Network



- To search and rescue operation
 - To provide emergency services, etc.
 - To carry victims people from hazard area
 - To move peoples to safe place in case of disasters
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General Architecture



Data Acquisition



Evacuation Route Map



Real Time Monitoring for Road Condition

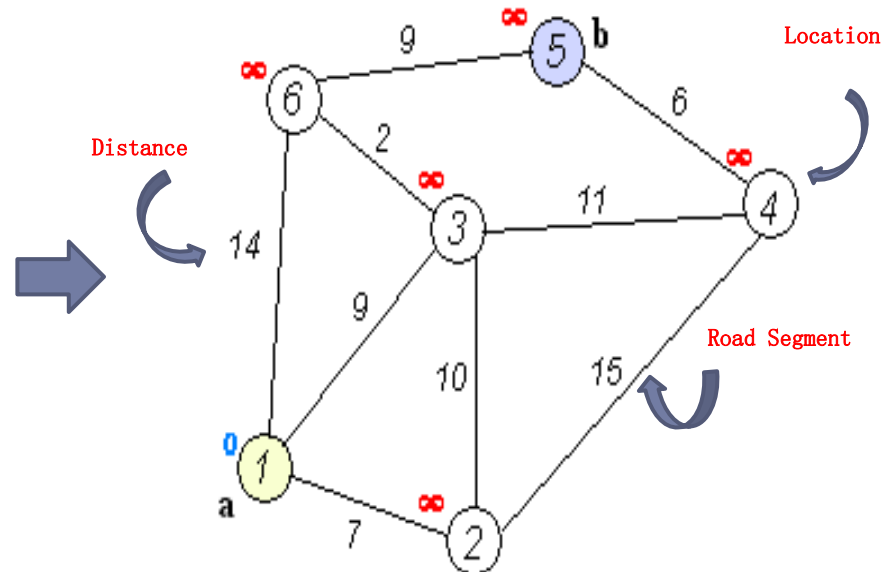


- To have access to disaster struck areas
 - To provide urgent and critical life saving aids
 - To get accurate data timely and assess damage quickly
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Close Safe Places and Best Evacuation Route Identification

Safe Place



Summary

Land Data Acquisition



Victim People/
Emergency
Service Teams

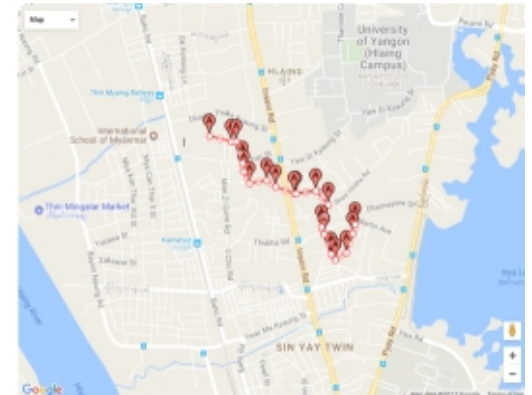


Disaster Area



Safe Place

Optimal Evacuation Route



Closest Safe Places



Conclusion

- Discussed to solve the problems faced by people and the emergency rescue teams
- Provide to know the safe place and the optimal evacuation routes
- Give the significant help to the emergency rescue teams and victim people
- Must improve the evacuation processes





**National Institute of
Information and Communications Technology**

K-zin Phyo and Myint Myint Sein, “Optimal Route Assessment for Emergency Vehicles Travelling on Complex Road Network”, 11th Multi-disciplinary International Workshop on Artificial Intelligence (MIWAI 2017), November 20-22,2017,Brunei.

Thank You So Much

The text "Thank You So Much" is rendered in a large, bubbly, 3D-style font. The letters are filled with a dense pattern of small, colorful flowers in shades of blue, purple, pink, and white. The text is surrounded by several larger, individual flowers of the same color palette, scattered around the letters. The overall effect is a vibrant and celebratory message.