

“Evaluating The Use of UAV’s For Local Government”



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Outline



- What are UAV's?
- What are UAV's for?
- Before the UAV.
- How is it used today?
- Cost options.
- Why City of Pharr uses a UAV?
- Conclusion.



What are UAV's

- **Unmanned
Aerial
Vehicle**



- is an aircraft without a human pilot aboard
- [Airplane](#)
- [MultiCopter](#)
- [Helicopter](#)

What are UAV's for?

- Military
 - Search & Rescue
 - Land Survey
 - Marketing
 - Surveillance
 - Hobbyist
- US Army
 - Police Dept
 - Fire Dept
 - Engineers
 - Advertising Company
 - Border Patrol
 - Homeland Security
 - Wildlife Protection
 - Entertainment



Before the UAV

- Border Patrol – Helicopter Crew

- Military – Scouts

- Police Dept – Raids

- Fire Dept – Building Rescue

- More Expensive

- Took Longer to respond

- Scouts were sent into danger

- Failed Raid

- Firemen hurt or trapped

How is it used today?

- Marketing

- Fire Dept

- GIS

- Police Dept



- Photos & Video

- Training

- Up-to-date Aerials

- Aerials (Event Safety)



Cost options



- Hire a company to collect aerial data
 - Saves Time
 - Better Quality
 - Sacrifice Costs
 - Repairs are timely
- Collect aerial data with your own UAV
 - Learning Curve
 - Less Quality
 - Costs less
 - Repairs are quicker

Why City of Pharr uses a UAV?



- Second option is **do-able** even without a budget
- **Invest Time** to keep costs low
- Long-term benefits
 - Saves Time
 - Better Quality
 - Costs less
 - Quicker Turnaround Repairs
- Multi-Dept uses (Police, Fire, GIS...)
- **Less Expensive** and **Less Risky** than manned flights

Our Hexacopter Build

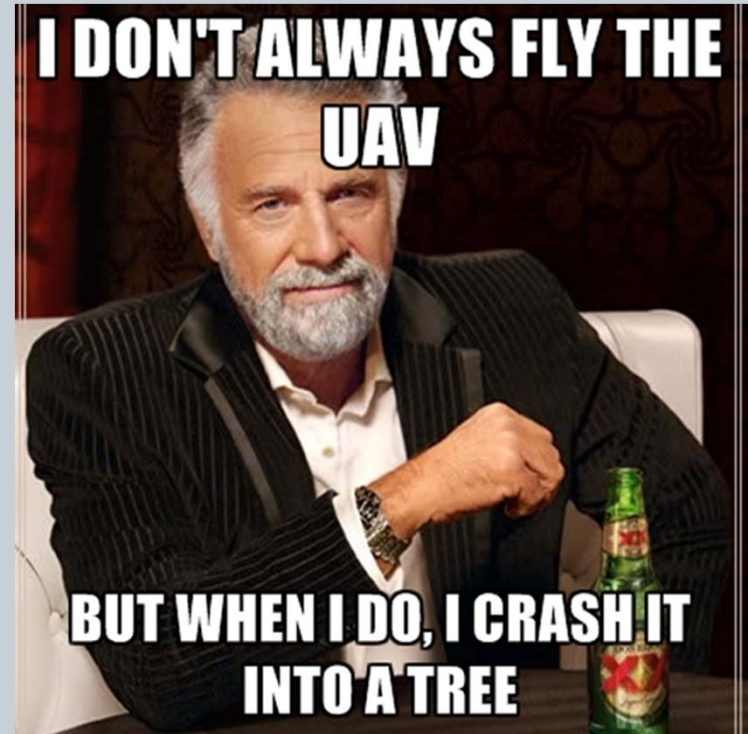
- . Frame \$329
 - .Flight Control Board \$239
 - .GPS \$69
 - .Telemetry Board \$59
 - .20A ESC's (6) \$156
 - .850Kv Motor (6) \$108
 - .Propellers (6) CW & CCW \$24
 - .2 sets Legs \$40
 - .3s 4200mAh Battery \$55
 - .Spektrum DX8 8CH Transmitter \$379
 - .Spektrum Receiver w/ Satellite \$89
-
- .Total \$1579
 - .Repairs \$460



Conclusion



- Create a budget
 - Parts
 - Maintenance
- Don't expect quality right away
- Have Patience
- Search different Vendors
- Plan on crashing A lot.



QUESTIONS?