U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

May 12, 2015

Exemption No. 11537
Regulatory Docket No. FAA–2015–0461

Mr. Jonathan P. Bracewell
Counsel for New Story Media, LLC
Bracewell Law Firm
4460 Jeske Road
Brenham, TX 77833

Dear Mr. Bracewell:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated February 19, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of New Story Media, LLC (hereinafter petitioner or operator) for an exemption. The exemption would allow the petitioner to operate an unmanned aircraft system (UAS) to conduct aerial photography, videography, surveying and mapping.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner are the DJI Phantom 2 and a DJI Inspire 1.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, New Story Media, LLC is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

In this grant of exemption, New Story Media, LLC is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 and DJI Inspire 1 when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the

operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC

qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on May 31, 2017, unless sooner superseded or rescinded.

Sincerely,
/s/
John S. Duncan
Director, Flight Standards Service

B R A C E W E L L
L A W F I R M

February 19, 2015

U.S. Department of Transportation
Docket Management System
1200 New Jersey Ave. S.E.
Washington, D.C. 20590

Re: Request for Exemption under Section 333 of the FAA Modernization and Reform Act of 2012 from 14 C.F.R. Part 21; 14 C.F.R. 43.7; 14 C.F.R. 43.11; 14 C.F.R. 45.11; 14 C.F.R. 45.27; 14 C.F.R. 45.29; 14 C.F.R. 61.113; 14 C.F.R. 91.7(a); 14 C.F.R. 91.9(b)(2); 14 C.F.R. 91.9(c); 14 C.F.R. 91.103(b)(2); 14 C.F.R. 91.105; 14 C.F.R. 91.109; 14 C.F.R. 91.119; 14 C.F.R. 91.121; 14 C.F.R. 91.151; 14 C.F.R. 91.203(a) & (b); 14 C.F.R. 91.215; 14 C.F.R. 91.403; 14 C.F.R. 91.405; 14 C.F.R. 91.407; 14 C.F.R. 91.409; and 14 C.F.R. 91.417.

Dear Sir or Madam:

New Story Media, LLC, a Texas Limited Liability Company, seeks an exemption to certain Federal Aviation Regulations (FARs) pursuant to Section 333 of the FAA Modernization and Reform Act of 2012 (the Reform Act) and Part 11 of Title 14 of the C.F.R. New Story Media, LLC is an organization providing aerial photography and cinematography services utilizing Small Unmanned Aircraft Systems (sUASs) in the creation of real estate listing advertisement materials mainly for large estates in rural areas of Texas. Additionally, New Story Media occasionally engages in a variety of aerial surveying activities including orthomosaic mapping which aids various businesses in project management by helping to create survey grade imagery which can be used for extracting volumetric data and conducting other geospatial analytics.

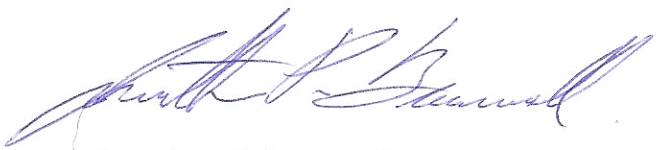
Approval of exemptions for New Story Media, LLC will allow commercial sUAS operations in primarily remote, rural areas across Texas for real estate photography and cinematography, and – to a lesser extent – in construction and other environments where a survey crew or conventional aircraft would be cumbersome at best, and pose severe safety risks at worst. New Story Media, LLC intends to employ a pilot who will act as the Pilot-in-Charge (PIC) having, at a minimum, a private pilot certificate and 3rd-class medical certificate. This pilot will receive flight instruction specific to the aircraft used by New Story Media, LLC from Mr. Clover Carroll, who has over 1,000 hours of flight time with various sUASs.

This exemption request should be granted because the use of the aircraft utilized by New Story Media, LLC under the conditions and limitations proposed below will meet or

exceed an equivalent level of safety as Congress has intended. The DJI Phantom 2 weighs only 2.9 lbs at takeoff, including the battery and camera apparatus. The DJI Phantom 2 is capable of programmable flight through DJI's Ground Station software which allows the operator to set GPS parameters for computer-controlled flight patterns including takeoff and landing. New Story Media, LLC's other sUAS, the DJI Inspire 1, weighs just 6.5 lbs. The lightweight aircraft covered by this exemption request are far safer than the alternative: manned aircraft weighing thousands of pounds and carrying hundreds of pounds of combustible fuel. Similar sUAS operations have already been approved in Exemption No. 11138, Douglas Trudeau, Realtor® and Exemption No. 11136, Advanced Aviation Solutions. In all cases, flights undertaken by employees of New Story Media, LLC will be conducted with safety as a paramount goal. All flights will be at low altitudes in low population density areas, and operators shall use pre-programmed, GPS-guided flight patterns whenever possible. No flights shall begin unless the aircraft has first acquired an adequate GPS signal for tracking purposes from the ground station and GPS-aided flight.

If you have need of additional information for the assessment of this exemption request please do not hesitate to contact us at 936-463-1898 or jonathan.bracewell@gmail.com

Thank you,



Jonathan P. Bracewell
Attorney for New Story Media, LLC

I. Summary

Pursuant to 14 C.F.R. Part 11, the following summary is provided for publication in the Federal Register, should it be determined that publication is needed:

Applicant seeks an exemption from the following rules:

14 C.F.R. Part 21; 14 C.F.R. 43.7; 14 C.F.R. 43.11; 14 C.F.R. 45.11; 14 C.F.R. 45.27; 14 C.F.R. 45.29; 14 C.F.R. 61.113; 14 C.F.R. 91.7(a); 14 C.F.R. 91.9(b)(2); 14 C.F.R. 91.9(c); 14 C.F.R. 91.103(b)(2); 14 C.F.R. 91.105; 14 C.F.R. 91.109; 14 C.F.R. 91.119; 14 C.F.R. 91.121; 14 C.F.R. 91.151; 14 C.F.R. 91.203(a) & (b); 14 C.F.R. 91.215; 14 C.F.R. 91.403; 14 C.F.R. 91.405; 14 C.F.R. 91.407; 14 C.F.R. 91.409; and 14 C.F.R. 91.417.

Approval of these exemptions for New Story Media, LLC will allow commercial operations of sUASs primarily in rural portions of Texas over private estates greater than 250 acres for the purpose of producing real estate marketing materials, and secondarily over limited-access areas such as the exterior of industrial complexes, pipelines, landfills and construction sites for the purpose of aerial survey and inspection activities. The exemption should be granted because the operations proposed by New Story Media, LLC, using unmanned sUASs weighing no more than 10 lbs., conducted according to the conditions and limitations discussed below will provide a level of safety exceeding that of traditional aerial operations utilizing manned aircraft. Each of the factors identified by the Congress in approving this exemption process under Section 333 – size, weight, speed, operational capability, proximity to airports, proximity to populated areas, and operation within visual line of light – supports approval of the exemptions sought by New Story Media, LLC. Specifically, the sUASs weigh no more 10 lbs., flight will be restricted to class G airspace at altitudes no greater than 400 feet AGL and at speeds no greater than 35 knots, and no flights will be conducted unless the aircraft has first acquired an adequate GPS signal to enable GPS-aided flight.

II. Contact Information

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III. New Story Media, LLC's Operations

A. The sUASs

New Story Media, LLC currently operates two models of aircraft: the DJI Phantom 2 and the DJI Inspire 1. The market for aerial imagery is rapidly evolving, and there are market forces which pressure vendors to constantly upgrade equipment. These facts, combined with the length of time it takes to receive a grant of exemption, may make it difficult to operate in the market with current equipment: by the time the exemption for the specific aircraft is granted, those aircraft may very likely be outdated and/or obsolete. Therefore, New Story Media, LLC requests that any exemption granted extend not only to aircraft currently owned by New Story Media, LLC, but also to any future sUASs owned by New Story Media, LLC that meet the following criteria:

1. The sUAS is manufactured by DJI.
2. The sUAS weighs no more than 10 lbs. at takeoff.
3. The sUAS has GPS capability which aids its flight.

or

1. The sUAS has already been approved for commercial use by a published FAA Grant of Exemption. E.g. the SenseFly eBee permitted in Exemption No. 11136, Advanced Aviation Solutions.

Without abandoning the above request, New Story Media, LLC explicitly requests the exemption allow the operation of the DJI Phantom 2 and the DJI Inspire 1. Both sUASs are battery-operated multirotor aircraft weighing less than 10 lbs.

Respectively, the sUAS employed by New Story Media, LLC have the following specifications:

Airframe: DJI Phantom 2
Flight Control System: The built-in flight control system contains the MC (main controller), IMU (inertial measurement unit), GPS, compass, and receiver. The IMU has a built-in inertial sensor and a barometric altimeter that measures both attitude and altitude. The compass reads geomagnetic information which assists the GPS to accurately calculate the aircraft's position and height in order to lock the aircraft in a stable hover. The receiver is used to communicate with the remote controller and the MC acts as the brains of the complete flight control system connecting and controlling all the modules together.
Max takeoff weight: 2.9 lbs.
Max flight speed: 30 knots

Max ascent/descent speed: 19.7 ft/sec; 6.6 ft/sec
Battery type: 3S LiPo, 11.1V, 5200mAh

Airframe: DJI Inspire 1
Flight Control System: The built-in flight control system contains the MC (main controller), GPS + GLONASS processor, IMU (inertial measurement unit) and compass. The MC is the brains of the system, receiving thousands of bits of data each second and translating that data for optimal flight stability. The GPS processor now includes the capability to receive signals from the Russian-built GLONASS satellites, which improves positioning accuracy and quicker satellite acquisition. The IMU contains a 6-axis gyroscope as well as an accelerometer.
Max takeoff weight: 6.5 lbs.
Max flight speed: 43 knots
Max ascent/descent speed: 16.4 ft/sec; 13.1 ft/sec
Battery type: 6S LiPo, 22.2V, 4500mAh

Each aircraft has distinct failsafe capabilities. The Phantom 2 failsafe function is triggered by one of three different possible events:

1. The remote control is powered off.
2. The remote control is powered on but the S1 switch is toggled in the position triggering the failsafe.
3. The aircraft loses sufficient signal strength from the remote controller.

When any of these events occurs, the Phantom 2 will either automatically land in its current location, or, if GPS signal is available, it will fly back to the location where it conducted takeoff (the "Home Point"). Furthermore, when the Phantom 2 detects a battery level of 15% it will automatically land at its current location. During this descent, the operator can minimally control the aircraft's attitude to avoid obstacles

The Inspire 1 has a more sophisticated failsafe function. The Inspire 1 continuously estimates the amount of battery power required to fly the aircraft back to the Home Point. Once this level of battery power is reached, a message will appear within the flight control program alerting the operator. New Story Media, LLC employees will always attempt to return the aircraft to the Home Point when this message appears. If no action is taken, the aircraft will automatically fly up to a pre-set altitude, then fly to the Home Point and land (this is the return-to-home function or RTH). Additionally, the flight software will automatically conduct an RTH if the signal from the remote controller is lost for more than three seconds. Before each flight, the operator will inspect the area where the flight will take place and note the tallest obstruction. The operator will then set the failsafe altitude to a height greater than the tallest object in the area.

Both sUASs have a limited range due to the physical limitations of the transmissions from the remote controller. In field conditions, this limited range is generally not greater than 1,000-1,200 meters or roughly 3,300-3,900 feet.

Both sUASs have the capability for a maximum altitude to be set prior to each flight. This is a separate setting from the maximum altitudes which are unchangeable and are set by the manufacturer from the factory. Using GPS data to determine altitude, the sUASs will not violate either of these altitude limit parameters.

The Phantom 2 sUAS has the ability to conduct a pre-programmed, automated flight pattern from takeoff to landing. The aircraft will take off from a designated point and fly in a straight line to various waypoints in sequence. It is this automated flight function which allows the sUAS to take geo-referenced photographs for survey-grade photogrammetry and other analytics. The flight control software that performs this automated flight function is not currently compatible with the DJI Inspire 1, but an update is expected to enable this feature soon

Please refer to the respective user manuals for each aircraft which are attached to this petition as Exhibits 1 and 5 for additional information.

B. Flight Conditions

The sUASs will be flown in airspace no greater than 400 feet above ground level ("AGL") and under controlled conditions in predominantly rural areas. When not operating in a rural environment, the operations will be conducted in low-population areas with strict personnel access controls such as construction zones. The majority of flights will occur in rural areas of Texas over real estate properties that are typically greater than 250 acres in size. New Story Media, LLC will work with the local FSDOs to ensure each operation is conducted in a way that avoids conflict with other ongoing operations in the NAS. The aircraft will be flown only in class G airspace during VMC, visual meteorological conditions: no less than 500 feet below and no less than 2,000 feet horizontally from a cloud and with visibility at least three statute miles from the PIC.

C. Flight Operations

New Story Media, LLC will require every operator to fly the aircraft within visual line of sight (VLOS) of the operator as well as a second individual previously designated as the visual observer (VO). Flights shall always be conducted in class G airspace at or below 400 feet AGL and at speeds no greater than 35 knots with the Inspire 1 and 25 knots with the Phantom 2.

The PIC shall have at a minimum a private pilot certification as well as a third class medical certificate. Each PIC will undergo hands-on training with the sUASs and

achieve a minimum of 10 flight hours before flying for a client of New Story Media, LLC.

The sUAS will fly only over private property for which New Story Media, LLC has permission to fly over. All operations will comply fully with the Texas Privacy Act of 2014 and all other applicable state and local laws. The majority of flights will take place over real property exceeding 250 acres. The PIC will coordinate with the local FSDO when planning operations. The PIC will consult aeronautical charts and review the relevant weather data prior to each operation, and brief other members of the flight crew on his findings before each operation begins. During the planning phase of each operation the flight crew will ensure that the sUAS has the most recent firmware updates from the manufacturer so that the sUAS will operate using the most up-to-date controls and parameters from the manufacturer. The flight crew shall perform this firmware check no more than one week prior to the scheduled flight.

The flight crew will utilize various measures to ensure that non-participating persons do not accidentally enter the flight area. Such measures may include locking the gate to a ranch, or setting orange cones on the driveway to a property. The flight crew will always work with the property owner to ensure unnecessary personnel are not present during the flight.

Before conducting any operations, the flight crew will inspect the components of the sUAS for any visible indications of damage. The crew will then turn on the sUAS and allow it to conduct its full self-diagnostic test which each sUAS performs upon startup. The flight crew will ensure that the sUAS has acquired its GPS signal and then calibrate the onboard compass. No flights (including the test flight) shall take place unless the sUAS has acquired a GPS signal the compass has been calibrated properly in accordance with the respective sUAS user manual, and the sUAS has passed its self-diagnostic test. Next, the PIC will verify that the altitude limit in the flight control program has been set to 400 feet AGL. The crew will then initiate a brief test flight, bringing the sUAS to 15 feet AGL in order to check the flight controls and camera operation. After performing as many maneuvers as the PIC finds necessary, but never exceeding more than 100 ft horizontally from the ground station, the test flight shall conclude and the PIC shall bring the aircraft back to its Home Point. Every Home Point shall be prominently marked with orange cones or white engineering tape or some other method of marking which provides a similar level of visibility.

The VO shall make use of a separate monitor to assist in maintaining visual contact with the sUAS. This monitor will display images received wirelessly from the camera onboard the sUAS.

At any time during the flight, should the aircraft lose connection with the remote control, the flight control system failsafe will be activated automatically, and the aircraft

will make a controlled descent either in place or to the Home Point as dictated by the aircraft's capabilities and weather conditions.

In addition to these safeguards, DJI has programmed into the firmware of each sUAS they sell certain "no-fly zones" which will prevent flights in restricted airspace. *See* Exhibit 5 at 46-48. Any DJI sUAS will not start its motors in these pre-programmed no-fly zones, or if it enters this space during an ongoing flight, the sUAS will automatically descend to an altitude outside of the no-fly zone, or commence landing.

During flights, the PIC and the VO will stand next to each other in constant voice contact at the ground station. If weather conditions suddenly make continued flight unsafe, the PIC will fly the sUAS to a safe altitude above all local obstructions and bring the sUAS back to the Home Point or alternatively use the camera to locate a safe secondary landing area if the weather conditions are such that returning to the Home Point is either not feasible or not safe.

Flights will be limited to 75% of the battery life of the sUAS. This information is indicated on the sUAS itself by flashing lights and also on the remote controller's video screen.

When performing aerial survey operations by pre-programmed, automated flight patterns, the PIC will maintain positive control of the remote controller in the event a manual override in necessary. All procedures will remain the same for this type of operation with the following exceptions:

1. The flight crew shall thoroughly inspect the area to be surveyed and note all obstructions.
2. The PIC shall set the automated flight altitude at a level certain to clear the obstacles observed by the flight crew.
3. The PIC shall coordinate with the site foreman, or a person of similar responsibility to determine the best time of day during which to conduct the operation.

IV. Aircraft and Equivalent Level of Safety

New Story Media, LLC proposes that the exemption requested herein apply to any civil aircraft that have the characteristics and that operate with the limitations listed herein. These limitations provide for at least an equivalent or higher level of safety to operations under the current regulatory structure.

These limitations and conditions to which New Story Media, LLC agrees to be bound when conducting commercial operations under an FAA issued-exemption include:

1. The sUAS will weigh less than 10 lbs. The DJI Phantom 2 weighs 2.9 lbs. and the DJI Inspire 1 weighs 6.5 lbs.
2. Flights will be operated within VLOS of the PIC and VO and only during VMC.
3. Maximum total flight time for each flight will be 75% of battery life. Flights will be terminated once the battery reaches a 25% level. This information is transmitted to the remote controller as well as indicated by flashing lights on the sUAS itself.
4. The sUAS will remain clear and yield the right of way to all other manned operations and activities at all times.
5. Flights will be conducted at an altitude not to exceed 400 feet AGL.
6. Minimum crew for each operation will consist of the PIC and VO.
7. A briefing from the PIC will be conducted in regard to the planned sUAS operations prior to each day's activities. It will be mandatory that all personnel who will be performing duties in connection with the operations be present for this briefing.
8. The operator will obtain a FAA Civil COA prior to conducting any operations under this grant of exemption.
9. The operator will request a Notice to Airman (NOTAM) not more than 72 hours in advance, but not less than 48 hours prior to the operation.
10. The PIC and VO will at all times be able to communicate by voice and be stationed next to each other at the ground station.
11. Written and/or oral permission from the landowner or authorized agent, of the land over which the sUAS is flying will be obtained prior to each operation.
12. All required permissions and permits will be obtained from territorial, state, county and/or city jurisdictions, including local law enforcement, fire, or other appropriate governmental agencies.
13. The sUAS will have the capability to automatically abort a flight in case of poor signal communication with the PIC's remote controller.
14. No operations shall take place within 5 nautical miles of an airport reference as noted on a FAA published aeronautical chart.

Satisfaction of the criteria provided in Section 333 of the Reform Act of 2012 – size, weight, speed, operating capabilities, proximity to airports and populated areas and operation within visual line of light and national security – provide more than adequate justification for the grant of the requested exemptions allowing commercial operation of applicant's sUASs pursuant to the conditions and operations described above.

V. Public Interest and Safety

Use of the sUASs will increase ground safety by eliminating the need to have a manned aircraft take the videos or photographs. As recognized in other exemptions, (e.g. Exemption Nos. 11136 & 11138, attached to this petition as Exhibits 9 & 10), sUAS flight offers several advantages over manned aircraft. Manned aircraft often weigh in excess of 5,000 lbs. and carry more than 100 gallons of highly combustible fuel. The sUASs in this petition carry no combustible fuel and only weigh a maximum of 6.5 lbs., greatly reducing the potential forces at work in the case of an incident. Furthermore, there is much less risk of harm to human life since the sUASs have no crew onboard.

Environmental factors weigh heavily in the public interest and in favor of granting the exemption. Other than real estate marketing videos, New Story Media, LLC engages in environmental compliance operations, including, but not limited to, oil pipeline remote inspection and smokestack inspection. With respect to visual inspection of smokestacks, flying an sUAS allows the inspector to remain safely on the ground reviewing images and video instead of having to be hoisted into the air hundreds of feet in order to conduct the inspection. Use of the sUASs makes these operations not just safer, but more efficient so that companies can achieve compliance in a less costly manner. Additionally, flying an sUAS has a negligible environmental impact compared to manned aircraft which burn hundreds of pounds of hydrocarbon-based fuels during flight.

VI. Regulations from Which Exemption Is Requested

A. 14 C.F.R. Part 21 - Certification Procedures for Products and Parts

New Story Media, LLC requests an exemption from 14 C.F.R. Part 21, and particularly Part 21(h). Part 21 prescribes, in pertinent part, the procedural requirements for issuing and changing design approvals, production approvals, airworthiness certificates, and airworthiness approvals.The FAA has held in Exemption No. 11136, Advanced Aviation Solutions, that exemption from Part 21 was not necessary because of the diminutive size of the aircraft, and lack of personnel on board the aircraft. *See* Exhibit 9, 12-13.

Equivalent level of safety: An equivalent level of safety with airworthiness certification can be achieved by the use of sUASs and the conditions and limitations imposed on operations which have been proposed in this petition. As the FAA pointed out in Exemption No. 11136, "Manned aircraft are at risk of fuel spillage and fire in the event of an incident or accident. The UA carries no fuel and therefore the risk of fire . . . due to fuel spillage is eliminated." *See* Exhibit 9 at 12. Additionally, just like the sUAS in that grant of exemption, the sUASs under this petition have GPS guided capabilities which greatly reduce the likelihood of accidents. As the FAA observed, "These safety features ensure that these operations will not adversely impact safety compared to a manned

aircraft performing a similar operation . . . ." *Id.* at 12-13. In addition to these safety features, the sUAS operated by New Story Media, LLC weigh less than 10 lbs., fly no faster than 43 knots, and can fly no more than 1,200m from the remote controller in ordinary field conditions.

B. 14 C.F.R. 43.7: Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration.

New Story Media, LLC requests an exemption from 14 C.F.R. 43.7. This part provides, inter alia, that the holder of a mechanic certificate or a repair station certificate may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service.

Equivalent level of safety: New Story Media, LLC has years of experience among its employees in repairing and modifying recreational aircraft such as those included in this petition. The nature of the sUASs is that of a model aircraft. When necessary, New Story Media, LLC and its employees will conduct inspections and maintenance based on maintenance guidelines provided by the manufacturer of the sUASs, DJI. All modifications and repairs will be tested for proper functionality before flying over property not belonging to New Story Media, LLC or its agents. Because of the simple nature of these aircraft which have few moving parts, and the low risk inherent in operating them due to their size, an equivalent level of safety can be achieved by simply conducting test flights lasting at a minimum 15 minutes.

C. 14 C.F.R. 43.11: Content, form, and disposition of records for inspections conducted under parts 91 and 125 and §§ 135.411(a)(1) and 135.419 of this chapter.

New Story Media, LLC requests an exemption from 14 C.F.R. 43.11. This part provides that maintenance records must be kept up to date by each inspector when an aircraft is deemed ready for return to service.

Equivalent level of safety: Because there are no certificated maintenance workers or inspectors for this type of aircraft as contemplated by this section, § 43.11 simply provides for no additional safety in flight. An equivalent level of safety will be achieved by testing the sUAS for 15 minutes of flight after each repair and/or modification by New Story Media, LLC personnel. Also, the PIC will perform a short test flight prior to each operation in order to ensure proper functioning of the flight controls as described above. *See supra* at 7.

D. 14 C.F.R. 45.11: Marking of products.

New Story Media, LLC requests an exemption from 14 C.F.R. 45.11. This part provides, inter alia, that the manufacturers of aircraft, engines, propellers, mark such aircraft, engines, or propellers with an approved fireproof identification plate. The sUASs, due to their small size, do not have room for fireproof placards to be placed in or on them. Any required placards could become hazardous, due to the additional weight and strain placed on the frame of the sUASs. Any additional weight could deteriorate the flight stability of the aircraft since they weigh less than 10 lbs.

Equivalent level of safety: New Story Media, LLC's flight crew will keep information related to the sUASs, including the user manual, at the ground station and affix the N-Numbers, once obtained from the FAA Registration Office, on the "arms" or fuselage of the sUASs as large as practicably possible. The exemption will provide an equivalent level of safety to 14 C.F.R. 45.11 because the relevant documentation containing the serial number will be at the ground station with the PIC for inspection purposes rather than with the sUASs.

E. 14 C.F.R. 45.27: Location of marks; nonfixed-wing aircraft.

New Story Media, LLC requests an exemption from 14 C.F.R. 45.27. This part provides, *inter alia*, that each operator of a rotorcraft must display on that rotorcraft horizontally on both surfaces of the cabin, fuselage, boom, or tail the marks required by § 45.23. The sUASs, due to their small size, do not have a cabin, fuselage, boom or tail in the ordinary sense, to display the marks required by § 45.23.

Equivalent level of safety: Once New Story Media, LLC receives its N-Number(s), it will display these marks on the "arms" or fuselage of the aircraft as large as practicably possible. This exemption provides an equivalent level of safety to 14 C.F.R. 45.27 because the sUASs will be registered with the FAA Aircraft Registration Branch. In the event of an incident, the sUASs will be traceable to New Story Media, LLC.

F. 14 C.F.R. 45.29: Size of marks.

New Story Media, LLC requests an exemption from 14 C.F.R. 45.29. This part provides, *inter alia*, at subsection (b)(3) that the registration marks for rotorcraft must be at least 12 inches high. The sUASs, due to their small size do not have any surface areas large enough to permit such markings of that size.

Equivalent level of safety: Once New Story Media, LLC receives its N-Number(s), it will display these marks on the "arms" or fuselage of the aircraft al large as practicably possible. This exemption provides an equivalent level of safety to 14 C.F.R. 45.29 because the sUASs will be registered with the FAA Aircraft Registration Branch. In the event of an incident, the sUASs will be traceable to New Story Media, LLC.

G. 14 C.F.R. 61.113: Private pilot privileges and limitations: Pilot in command.

New Story Media, LLC requests an exemption from 14 C.F.R. 61.113. This part prohibits persons with private pilot certificates from operating an aircraft for hire. In Exemption No. 11062 to Astraeus Aerial, the FAA determined that a PIC with a private pilot certificate operating a sUAS would not adversely affect operations in the NAS or present a hazard to persons or property on the ground. Therefore, New Story Media, LLC requests a similar determination be made with respect to this petition.

Equivalent level of safety: The intent of requiring a commercial certificate before being able to operate an aircraft for hire is to protect human lives because most flights for hire are manned. Additionally, a commercial certificate equates to greater experience with aircraft. However, with respect to sUASs, a commercial certificate does not result in greater flight experience. Instead, New Story Media, LLC will achieve an equivalent level of safety by ensuring all PICs go through a rigorous training program with Mr. Clover Carroll involving a minimum of 3 hours of simulator time and 10 flight hours in a multi-rotor sUAS owned and operated by New Story Media, LLC. Due to the inherent flight time restrictions caused by battery capacity, this equates to a minimum of 20 takeoff sequences and 20 landing sequences.

H. 14 C.F.R. 91.7(a): Civil aircraft airworthiness.

The FAA has previously stated that no exemption is required for a member of the DJI Phantom 2 family. *See* Exhibit 10 at 17. New Story Media, LLC requests a similar for its sUASs: the DJI Phantom 2 and the DJI Inspire 1. The Inspire 1 is significantly similar to the Phantom 2 in structure and operation, but with additional safety features, an improved flight control system, and improved electric motors.

In the alternative, and without abandoning the request above, New Story Media, LLC requests an exemption from 14 C.F.R. 91.7(a) on the following grounds. The regulation requires that no person may operate a civil aircraft unless it is in airworthy condition. Since there will be no airworthiness certificate issued for the aircraft at issue in this petition, it would be impossible to comply with this regulation.

Equivalent level of safety: New Story Media, LLC flight crews will achieve an equivalent level of safety by testing the sUAS for 15 minutes of flight after each repair and/or modification. Also, the PIC will perform a short test flight prior to each operation in order to ensure proper functioning of the flight controls as described above. *Supra* at 7.

I. 14 C.F.R. 91.9(b)(2): Civil aircraft flight manual, marking, and placard requirements.

The FAA has previously stated that no exemption is required for this section. *See* Exemption No. 11136, Exhibit 9 at 16. New Story Media, LLC requests the same determination be made for this petition.

Alternatively, and without abandoning the argument above, New Story Media, LLC requests exemption from 14 C.F.R. 91.9(b)(2) because it is impossible to comply with the regulation given the small size of the sUASs. The regulation requires "a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof" to be available **in** the aircraft. There is no room in the sUASs to store any extra materials, let alone a flight manual or placards.

Equivalent level of safety: New Story Media, LLC and its agents will achieve an equivalent level of safety by retaining all available manufacturer documentation in the travel case for each respective sUAS. This shall include the User Manual, Quick Start Guide, and other relevant safety information such as the "Battery Safety Guidelines." The flight crew will have these materials available to them because the case for the sUAS will remain at the ground station during flights.

J. 14 C.F.R. 91.9(c): Civil aircraft flight manual marking, and placard requirements.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.9(c). This part provides: "No person may operate a U.S.-registered civil aircraft unless that aircraft is identified in accordance with part 45 of this chapter."

As stated above, New Story Media, LLC will obtain an N-Number from the FAA Registration Office and the sUASs, due to their small size, do not have room to contain placards, flight manuals, or 12-inch markings required in part 45 of 14 C.F.R.

Equivalent level of safety: Once New Story Media, LLC receives its N-Number(s), it will display these marks on the "arms" or fuselage of the aircraft as large as practicably possible. This exemption provides an equivalent level of safety to 14 C.F.R. 91.9(c) because the sUASs will be registered with the FAA Aircraft Registration Branch. In the event of an incident, the sUASs will be traceable to New Story Media, LLC.

K. 14 C.F.R. 91.103(b)(2): Preflight action.

The FAA has previously determined that relief from this section is not necessary. *See* Exhibit 10 at 17. New Story Media, LLC requests that a similar determination be made with respect to this petition.

Equivalent level of safety: Just as in the above-referenced Exemption No. 11138, New Story Media, LLC requires certain preflight actions to be taken prior to each flight as outlined above in section III.C. of this petition. These actions include reviewing aeronautical chart data for the area of operations, reviewing applicable weather data, conducting a pre-flight inspection, calibrating the compass, acquiring GPS satellite signals and performing a very limited test flight. These preflight actions will ensure an equivalent level of safety with the requirements of § 91.103(b)(2).

L. 14 C.F.R. 91.105: Flight crewmembers at stations.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.105 since this section is not applicable due to the sUASs carrying no flight crewmembers.

Equivalent level of safety: New Story Media, LLC will not operate the aircraft unless someone is at the controls at all times. The remote controller will be manned regardless of whether the sUAS is engaged in a cinematic photo shoot or conducting a pre-programmed, automated aerial survey. Furthermore, as described above in section III. C. of this petition, the VO will always remain at the ground station in voice contact with the PIC. This will result in an equivalent level of safety as the requirements of § 91.105.

M 14 C.F.R. 91.109 Flight instruction; Simulated instrument flight and certain flight tests.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.109. This regulation requires dual controls for aircraft when conducting flight instruction. The sUASs operated by New Story Media, LLC do not have dual controls, or the capability to add a second remote controller, making compliance with this section impossible.

Equivalent level of safety: New Story Media, LLC will be able achieve an equivalent level of safety during training flights because just like the throwover controls contemplated in this regulation, the remote controller can be easily transferred to the possession of the instructor midflight. This ability, combined with the low weight and unmanned nature of the aircraft certainly exceeds the level of safety provided by dual controls in a traditional manned aircraft during a training flight.

N. 14 C.F.R. 91.119: Minimum safe altitudes: General.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.119. This regulation provides:

> Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

> **(a)** ***Anywhere.*** An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
> **(b)** ***Over congested areas.*** Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
> **(c)** ***Over other than congested areas.*** An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

New Story Media, LLC intends to operate its sUASs at altitudes no greater than 400 feet AGL.

Equivalent level of safety: New Story Media, LLC's operations will achieve an equivalent level of safety with this regulation by maintaining altitudes no greater than 400 feet AGL. This is in conformity with the operating standards set forth in Advisory Circular (AC) 91-57. Additionally, the sUASs flown and operated by New Story Media, LLC all have GPS-aided flight stability integrated into the flight control system. This allows the sUASs to maintain their position precisely when there are no inputs given through the remote controller. This allows the operator to make controlled, steady approaches to various obstacles for purposes of inspection, such as when taking images of cooling towers and smokestacks for regulatory compliance purposes. While flying close to such large obstructions poses a risk to the aircraft, the risk to infrastructure is negligible due to the weight of the sUASs being less than 10 lbs. The PIC shall always assess the risks to people and property when conducting such operations, and either continue the mission or abort accordingly.

O. 14 C.F.R. 91.121: Altimeter settings.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.121. This regulation provides guidelines for altimeter use in maintaining the cruising altitude or flight level of the aircraft. Specifically, the regulation calls for setting the altimeter of an aircraft referenced to mean sea level (MSL). Due to the limitations of the software provided by the manufacturer, it is impossible to comply with this requirement.

Equivalent level of safety: The sUASs operated by New Story Media, LLC have flight control software which provides an altitude readout to the video screen attached to the remote controller. This altitude readout is always expressed as a value in terms of feet or meters AGL. This value is computed using GPS signals as well as an onboard barometer. Due to limitations in the software, it is impossible to cause the altitude readout to be expressed in terms of feet or meters above MSL. New Story Media, LLC will achieve an equivalent level of safety by ensuring the maximum altitude is set to 400 feet

AGL prior to each flight. The purpose of the regulation is to provide separation between aircraft during flight. Maintaining flight in class G airspace within VLOS during VMC at altitudes no greater than 400 feet AGL (along with other operating procedures outlined above) will ensure that the sUASs do not interfere with the flight of other aircraft.

P. 14 C.F.R. 91.151: Fuel requirements for flight in VFR conditions.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.151. This regulation requires aircraft to have an amount of fuel that would carry the aircraft either 20 or 30 minutes beyond the intended landing point, dependent upon what type of aircraft is in use. It is impossible to comply with this regulation due to the current limitations of the sUASs in this petition; primarily because the sUASs carry no fuel at all, but only chemically stored energy in onboard batteries.

Equivalent level of safety: New Story Media, LLC will achieve an equivalent level of safety by requiring its PICs to initiate landing when the indicated battery level reaches 25% of its total capacity. This precaution, combined with the automated return-to-home features built into the flight control system will prevent the type of incidents in view with respect to § 91.151.

Q. 14 C.F.R. 91.203(a) & (b): Civil aircraft: Certifications required.

The FAA has previously determined that exemption from 14 C.F.R. 91.203(a) & (b) is not necessary. *See* Exhibit 9 at 16. New Story Media, LLC requests a similar determination with respect to this petition.

Alternatively, and without abandoning the argument above, New Story Media, LLC requests an exemption from 14 C.F.R. 91.203(a) & (b). This regulation requires, *inter alia*, that all aircraft have current airworthiness certificates. This regulation cannot be complied with due to there being no certification process in place for aircraft of this type.

Equivalent level of safety: *See* section VI. H. of this petition, *supra,* at 13. An equivalent level of safety can be reached by ensuring that the flight crew perform its duties in accordance with the manufacturers instructions and recommendations and in accordance with the procedures outlined in this petition above in section III. C., including, but not limited to, routine visual inspections of the equipment, regular firmware and software updates, as well as regular test flights under controlled conditions.

R. 14 C.F.R. 91.215: ATC transponder and altitude reporting equipment and use.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.215. It is impossible to comply with the requirement of this section when operating the sUASs covered by this petition. The sUASs are not equipped with radio equipment in order to

transmit electromagnetic signals produced by a transponder. Furthermore, no sUAS operated by New Story Media, LLC would be able to carry the additional weight of a transponder. For example, the Garmin GTX-327 digital transponder weighs 2.4 lbs. - 83% of the weight of the Phantom 2 and 37% of the weight of the Inspire 1.

Equivalent level of safety: New Story Media, LLC will achieve an equivalent level of safety by restricting all flights it conducts to altitudes no greater than 400 feet AGL within class G airspace only. Additionally, no flights will be conducted within 5 nautical miles of an airport reference point as denoted on a current FAA-published aeronautical chart. These measures will reduce the risk of collision with another aircraft to a negligible level and likely exceed the level of safety achieved by a transponder.

S. 14 C.F.R. 91.403: General.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.403. This regulation provides, *inter alia*, that the owner of an aircraft must maintain it in an airworthy manner and any maintenance performed on an aircraft must be done in a manner consistent with Part 43 of Title 14 of the C.F.R. New Story Media, LLC will certainly maintain the airworthiness of its fleet of sUASs, but as discussed above in sections VI. B. & C. of this petition, there exists good cause to exempt New Story Media, LLC from certain portions of Part 43 of Title 14 C.F.R. *See supra* at 11.

Equivalent level of safety: An equivalent level of safety will be achieved by testing the sUAS for 15 minutes of flight after each repair and/or modification by New Story Media, LLC personnel. Also, the PIC will perform a short test flight prior to each operation in order to ensure proper functioning of the flight controls as described above. *Supra* at 7.

T. 14 C.F.R. 91.405: Maintenance required.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.405. This regulation requires maintenance personnel to make repairs in accordance with Part 43 of Title 14 C.F.R. and to make entries in the maintenance records accordingly. New Story Media, LLC contends that maintenance records for sUASs do not provide an additional amount of safety over regular inspections and test flights under controlled conditions. The sUASs operated by New Story Media, LLC are so new that there exist no industry standard guidelines for when parts should be replaced following a given number of hours of operation. Documenting the length of time a certain part has been in operation will not give maintenance personnel any meaningful data with respect to the expected lifetime or serviceability of that part.

The quadricopters operated by New Story Media, LLC only have four moving parts that affect their flight - the four electric motors which power the propellers. The

attitude, altitude, and velocity of the aircraft all vary by individually increasing or decreasing the speed of these four electric motors. The flight control system interprets inputs from the controller and through a complex array of algorithms determines the necessary power inputs to the four electric motors in order to execute the desired maneuver. This system of flight control is far different from a standard aircraft which combines electronic and hydraulic systems with an internal combustion engine. While a standard aircraft has many points of failure, the nature of an sUAS is that malfunctions are immediately obvious upon takeoff: either the flight control system is operating correctly or not, either the electric motors are working or they are not, and so on. Furthermore, due to the flight control system being driven by software, and the proprietary nature of the algorithms, there is no possible way to detect a potential failure in this system by visual inspections. Instead, the sUASs go through a type of "boot up" process during which the software runs certain self-diagnostic tests. Given the low risk to life and property presented by sUASs weighing less than 10 lbs., keeping detailed maintenance records will simply not increase the level of safety beyond that achieved by conducting regular test flights under strictly controlled conditions combined with visual inspections and the onboard self-diagnostic software.

Equivalent level of safety: New Story Media, LLC will achieve an equivalent level of safety, taking into account the low weight of the sUASs, by conducting regular test flights and visually inspecting the physical elements of the flight control system as described previously in this petition.

U. 14 C.F.R. 91.407: Operation after maintenance, preventive maintenance, rebuilding, or alteration.

New Story Media, LLC requests an exemption to 14 C.F.R. 91.407. This regulation provides, in part, that no one may operate an aircraft after maintenance has been conducted upon it, unless the maintenance was in conformity with Part 43 of Title 14 C.F.R. New Story Media, LLC has requested exemption from the applicable portions of Part 43 and therefore requests an exemption to this section as well.

Equivalent level of safety: New Story Media, LLC personnel will inspect the physical parts of the sUAS for damage, wear, and other defects prior to each flight. This, combined with the self-diagnostic features built into the sUASs and routine test flights after each repair and prior to each operation will allow for an equivalent level of safety.

V. 14 C.F.R. 91.409: Inspections.

New Story Media, LLC requests an exemption from 14 C.F.R. 91.409. This section provides specific requirements for inspections of aircraft, including annual inspections for airworthiness certification. As discussed previously, regulations regarding

airworthiness certification are largely inapplicable to sUASs due to there being no approved certification process in existence for this type of aircraft.

Equivalent level of safety: New Story Media, LLC proposes in this petition to conduct visual inspections and test flights prior to each operation and following every repair or modification made to a sUAS. Thus, inspections of the sUASs will take place far more often than the 100-hour interval and/or annual inspections required by § 91.409.

W. 14 C.F.R. 91.417: Maintenance records

New Story Media, LLC requests exemption from 14 C.F.R. 91.417. This section is only applicable for aircraft with an airworthiness certificate. The sUASs will not have airworthiness certificates, therefore this section is inapplicable to sUAS operations.

Equivalent level of safety: New Story Media, LLC does not intend to keep maintenance records for its sUASs due to the rapidly evolving nature of the industry which causes many sUASs to become obsolete in a matter of months, and the reasons set forth above in section VI. T. of this petition. *Supra* at 18-19.