Aarhus, Denmark September 20. 2015

This is a response from the **Danish National Model Flyer Association**
"Modelflyvning Danmark" to the
Advance Notice of Proposed Amendment 2015-10 (A-NPA 2015-10).

Summary
Main conclusion:

The traditional non-commercial model flying that has been safely conducted by the national model flying organisations (competent authorities) throughout the last 50 years should be exempted for the intended new regulations as per A-NPA 2015-10.
The rationale is that the risks and threats which are addressed in the amendment are not now, and will not in the future be, caused by the traditional organized recreational and sporting model flying.

Enforcing the intended regulation on traditional model flying will have devastating consequences. The model flying community would typically have neither the structure nor the capacity implement and ratify the regulations.

This is definitely valid for the Danish Model flyer association that counts only 3.600 members and hence are solely based on voluntary efforts. It would not be possible to bring the capacity to handle the immense amount of administration that would be required as a consequence of the new regulation.
Moreover – for every state - having the national associations to enforcing regulations that for most people would seem disproportionate may heavily reduce the credibility of the associations hence reduce their influence and render the model flying community generally prone to piracy and disobedience.

*We do consider the **Advance Notice of Proposed Amendment 2015-10** to be disproportionate in the regard of traditional model flying. We find many of the proposed regulations unreasoned or reasoned based on lacking insight in the traditional model flyer community and their activities.*

Argumentation:

To fully understand the following argumentation some terms and concepts must be cleared:

Drones versus Model Planes:
We find it a fundamental mistake to regard any unmanned aircraft a *drone* hence impose a common regulations after the concept that one size fits everybody. Case is that one size fits nobody.

Terminology:
This is our terminology for unmanned aircrafts.
Actually we prefer talking about *a platform* or *an airframe*.

An airframe may be any of:

1. a winged airplane powered or not (motor planes and gliders)
2. a helicopter with one or two lifting rotors
3. a multi-rotor with 3 or more lifting rotors

None of them are by default *drones*.
They may all operate either as:

1. a model airplane (RPAS)
2. a drone (UAS)

ad. 1 It takes a trained pilot to fly a model plane (RPAS) by remote control.
The model plane may or may not be equipped with stabilizing equipment (copters often are) but it has no ability of self navigating. The remote pilot is flying the plane, comparable to that what a pilot would do in a manned aircraft. All flights are done VLOS (within Visual Line of Sight.)

ad.2. In our perspective a drone is the opposite. The airframe is equipped with electronics to be 100% stable in the air and would not need to be *flown* by the 'pilot' but rather *directed* by the pilot. Furthermore the drone may be able to auto navigate to a programmed destination i.e. to reach its destination unaided by its operator. The drone may even be able to auto navigate by means of programmed waypoints to circumvent known obstacles.

So in our perspective:

- a *model plane* need a skilled pilot to 'fly' it almost like a manned aircraft.
- a *drone* is able to auto navigate with or without intervention from its operator.

Hence:
A multi rotor airframe is <u>not</u> a drone, if it flies like a helicopter i.e. it needs its pilot to actively fly it.

About the segments using unmanned aircrafts
We see 3 main segments that are utilizing unmanned aircrafts – excluding the military.

1. The professional / commercial operators
2. The organized non commercial traditional model flyers, who are primarily but not solely flying from authorized model airfields.
3. The unorganized mixed group of beginners, kids and occasional users who are flying with anything anywhere

We see a clear segregation between the segments in skill, purpose and air space awareness.
Hence we see an unfulfilled need for separate regulations in order to properly address the needs and the characteristics of the individual segment.

ad-1.
The Danish NAA Trafikstyrelsen has made a very elaborate regulation of the professional segment so the professionals are well spoken for. We assume that this has happened or will soon happen in all states. Adhering to a new EU regulation would probably not impact this segment very much. This group is not in our primary focus.

ad-2.
The traditional model flyers that are doing what they have done for 50 years in good understanding with the environment and with people around. The NAA have provided sufficient and well proportioned regulations for this kind of flying. The Model flying Association and its associated model flying clubs are enforcing and teaching the rules.
Further they all make efforts to spread information about regulation, safety and good airmanship outside the organization in order to reaching out for the unorganized people and again in order to maintain the good reputation of model flying in the society.
Looking at the statistics from the liability insurance company speaks for itself. There has been only very few incidents through the last 20 years that can be categorized as serious. As for the Danish part I can say, that none of these incidents could have been avoided by means of the regulations in the proposal.

Imposing the suggested regulation on this group may lead to its fall, thus leaving the Model Flyers to be unorganized.

ad-3.
The characteristics of this group are minimum knowledge about regulations, poor airmanship and possibly poor piloting skills. This group can only vaguely be reached by rigid law enforcement. Only measure to address the potential risk represented by this group is massive information campaigns.

Generally nobody wants to bring air traffic at risk, but it may be the result of having people flying around while lacking any knowledge about the common safety and air space regulations. So campaigns on the internet, the social media and the public media may pose a way to obtain this. Also information supplied by the dealers would be helpful. Here EASA would be in a position to enforce that to happen.

Those very few that might possibly want to harm the air traffic cannot be addressed by general legislative initiatives in a world where anyone anonymously can purchase the equipment locally or overseas.
So the regulation imposed to address this risk may not solve its purpose, but it will certainly negatively impact the magnitude of people that are utilizing our common airspace for sport and recreation in good harmony with each other and their surroundings.

In the following sections a few chapters and specific proposals (blue boxes) are addressed.

2.4 Societal Context
Traditional model flying are mostly conducted on authorized airfields situated in rural areas or at least outside populated areas. Hence using cameras will not likely compromise privacy.

Proposal 1: It is proposed to regulate commercial and non-commercial operations as the identical drone might be used for both commercial and non-commercial activities with the same risk to uninvolved parties.

We cannot sustain that. It is of great significance by whom the airframe is operated, where it is operated and its ability to auto navigating. A traditional model airplane flown from an authorized model airfield under the national model flying association – the so-called competent authority - is not comparable to any other use of any airframe as regards risk profile – not more or less than in the last 50 years. No additional or renewed regulations would be needed here.
Separate regimes must be implemented for Traditional Model flying and commercial resp. unorganized drone flying.

Proposal 2:
Three categories will be established for the operation of drones:
— 'Open' category (low risk): safety is ensured through operations limitations, compliance with industry standards, and the requirement to have certain functionalities and a minimum set of operational rules. Enforcement mainly by the police.

By knowing the traditional model flying one would know that no industry standard would apply.
The vast majority of the airplanes are home built either from scratch or from kits. Enforcing industry standards would take out the very heart of traditional model flying.

Although the proposal may make good sense for professional and unorganized flight, it would be devastating for traditional model flying.

Also, for now it may be difficult to see how police would be able to fulfil this task. But that's another theme.

Proposal 6:
To prevent unintended flight outside safe areas and to increase compliance to applicable regulations, it is proposed to mandate geofencing and identification for certain drones and operation areas.

A technically exiting proposal. With GPS this would most certainly be possible. However the action taking by the airframe when approaching the fence should be considered. A multirotor airframe or helicopter may stop hanging in the air. But what is a winged airframe supposed to do?

Taking in consideration that the vast majority of model planes are home built, it might be a challenge to enforce the use of geofencing in this segment. Also considering the location of the authorized model airfields, geofencing would be of little use. One may fear that the equipment may be disproportionately expensive or difficult to fit within the model plane.

Geofencing however may be a better idea for standard drones sold by authorized dealers within Europe.

Proposal 12:
All drone operations in the 'open' category must be conducted within the defined limitations:

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- The pilot is responsible for the safe operation and safe distance from uninvolved persons and property on the ground and from other airspace users and shall never fly the drone above crowds (> 12 persons).

In our opinion it should never be allowed to fly over uninvolved persons on non-commercial conditions. And then only with very special measures taken as devised by the authorities e.g. safety and rescue operations.

Proposal 13:
For any drone operation over 50 m above ground, basic aviation awareness shall be required for the pilot.

We agree.

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Mass and subcategorisation
(Proposal 14 and -15)

We cannot recommend the levels of this subcategorisation.

An airframe of 999 g. may possibly not be that harmful to a manned airplane, but it certainly might be for a person that is hit by it.
The Danish NAA drone regulation initiative is talking about a toy limit of 250g. It seems more appropriate to us although even these little airframes may cause injuries. But wouldn't any toy.

Opposite we think that the 4Kg level is set too low, at least for Danish conditions.
Current level is 7 Kg. which seems to work very fine. In DK model planes above 7 Kg are restricted to operate only within the limited airspace of airfields especially approved for that purpose.

Model planes above 7 Kg MTOV must be technically approved. Also the owner/pilot must obtain the proper certificate for the airframe type.
Approving the airframe and issuing certificates is handled by the Danish Model flyer association "Modelflyvning Danmark" upon the authorisation given by the Danish NAA.

This completes the opinion from the Danish Model Flying Association "Modelflyvning Danmark"

Let's all hope for a safe but accommodating airspace where we all can exercise our interests whether they are commercial or leisure.