

### AN INTERVIEW WITH OAK RIDGE NATIONAL LABORATORY

SMi Group will welcome the expertise of Dr Peter Fuhr, Tech Director UAS Research Centre, Oak Ridge National Laboratory when he presents at UAV Technology Central & Eastern Europe conference this September in Prague.

In the run-up to the event, SMi Group caught up with Dr Fuhr to discuss trends and developments in the UAV market and his upcoming talk. For more information visit www.uav-technology.org



# Q. Tell us about you — what is your role in the UAV programme you work in and what information/content will you be sharing at the conference?

I am the Technology Director for Oak Ridge National Laboratory (ORNL) UAS Research Center. ORNL is a U.S. Department of Energy national laboratory. The primary focus of the UAS Research Center is to conduct R&D related to all aspects of unmanned systems. This is a very vibrant arena with multiple utilities involved in varying uses of UAS technology. I will be sharing our R&D efforts as well as multiple use cases associated with the use of unmanned aerial systems.

#### Q. Are there any sessions you are particularly looking forward to and why?

There are so many intriguing topics listed in the programme's agenda that I find actually all to be of relevance. The presentation of UAV activities in various countries and regions – let alone the wide range of applications – should make for an excellent interchange of ideas and experiences.

# Q. What are the major trends and developments in the UAV market and how has this impacted your programme and project?

Within the last 18 months there has been a dynamic change in the vendors providing "commercial-off-the-shelf" (COTS) UAVs. Certainly, the sophistication of inexpensive flight controllers with increasingly simplified UX interfaces is a notable advance, but in many instances, that is a programming improvement versus a fundamental advancement in the UAV hardware. Within the

electric sector, the utilities continue to be investigating if it is best to own and operate UAVs themselves, or should they contract services. The changes to the U.S. legality of UAV operation has significantly increased the number of available providers – a point that is still accelerating.

## Q. What are the current needs and challenges facing the CEE region and how advanced UAVS help to solve them?

This is such a good question...and one of the reasons I'm looking forward to participating in the meeting – to arrive at an answer to this very question!

### Q. What are the safety and legal challenges of operating UAV platforms, specifically in built up urban environments?

The differences in legalities for UAV operation are substantial across the globe.

## Q. As the military UAV market grows, should national and international regulation on UAV be reformed?

I will leave speculation on an answer to this question to the meeting participants from the military.

#### Q. Can the boundaries between military and civil UAV be sustained?

I foresee a continuation of current policies, that in a tiered layering of the use of the vertical air space, the military use takes precedence.

#### Q. What are the key areas that should be prioritised for UAV capability development?

Treating the UAV as a sensor platform rather than a "flying camera" provides immediate guidance to capability development. This is a central theme for the UAVs themselves and factors directly into applications within which the "flying sensor platforms" can be used.

### Q. What can we learn from the commercial UAVs?

Primarily that the hype associated with this (supposedly new) technology has quickly faded into reality with the number of commercial UAV vendors substantially reduced. Meanwhile, the private sector is rapidly adopting academic activities in the area of coordinated flight of multiple UAVs. This activity has great promise for inexpensive collaborative sensing of multi-disciplinary application areas from precision agriculture to post-disaster rescue and recovery.

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