



A plea for a purpose orientated use in modern operations

JAPCC – Lt Col Fehler DEU A

The dream of flying is one of the greatest challenges to mankind. Technology in this area has improved within the last decades in a unique way. The time of beginnings is over, practical issues now dominate the discussion. The main target for new technology and research comes from the military need. Purpose themes like financial affairs and security of operating personnel seem to be only instruments for negotiation. This phenomenon has characterized especially the discussion about manned and unmanned aerial vehicles since the beginning of their operational use.

During the last decade the number of unmanned (or to be politically correct uninhabited) aerial systems has increased significantly. Meanwhile new research and development results are released nearly every month. The traditional air related trade fairs and air shows provide a wide forum for this expanding technology and this will continue in the future.

However, the main focus is not the military demand but research for the technologically possible. In the past, the main factor affecting commercial success was the military requirement, predominantly sensor equipment and navigation systems. Meanwhile philosophy has changed. To be economical, military procurement policy demands commercial off the shelf products. Industry



immediately developed an attitude of research and development of solutions without knowing the requirements. The results were adventurous and sometimes bizarre but nevertheless a business success.

The operational success and obvious benefits of the use of unmanned aerial systems now require special focus on air traffic management in peacetime and during operations, procedural and technical skills for deconfliction and standardized training for operators. Reduced military budgets are continually forcing a new approach to procurement but the question is not if unmanned vehicles will be operated, but when, in which environment and under which circumstances.

The emotional discussion of the past decades on the use of unmanned aerial vehicles in a manned aircraft dominated environment has solicited the result that unmanned solutions must bring with them less potential danger. However, the actors in the discussion use science based analysis to prove more or less their point of view and to reflect their expectations and target orientated interests. Funded objectivity and critical approach have to take this fact into consideration.

Risks for the operator

One of the most important aspects of military operations is the protection of the personnel in theatre. This aspect causes, understandably, more emotional than rational reaction and leads to an extreme polarisation of



the discussion partners. Arguments like nearly “every military purpose can be covered by unmanned systems” are countered by “technical unreliability of unmanned system endangers operational success”.

However, the discussion must consider the complexity of the subject and must answer questions like:

“Does the use of manned platforms guarantee operational success or can the same or an even quicker and cheaper result be achieved under less dangerous circumstances?”

or:

“Do passengers of a commercial or military aircraft feel more comfortable when they are aware of the presence of the pilots?”

Obviously the negotiation of for and against has to consider the situative context – or in military terms - the situation.

The Financial Dilemma

Presently, political leadership demands military engagement with reducing financial resources. Significantly, many nations are willing to aim for a defined political ratio but have only the ambivalent capability of short-term military reaction. Thus ideal political solutions will be a long time coming. In this context, the cost of personnel and materiel is a big issue. Military leadership is in the dilemma of requesting investment while delivering no product. Therefore the arguments for saving money create the motivation for business without efficient increase in operational capabilities.

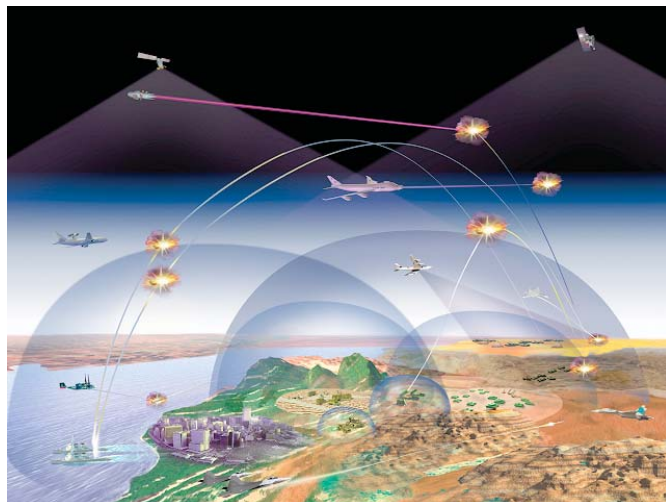
Unmanned Systems Operational Reliability

To date, the lack of danger to human life and the relatively cheap operating costs of unmanned aerial systems has bred an acceptance of a mission failure rate much higher than that expected from manned aircraft systems. This could be a false economy. The overriding aim must be the reliable achievement of operational capability, which is not continually constrained by financial restrictions.

Effects based approach to operations and network centric warfare

The next important issue in military operations is information management in the multinational environment and the consequences for the Joint forces conducting the operation. Beside the classification policy and the interoperability requirements the availability of assets and information distributing network capabilities for any situation has to be taken into consideration.

The network centric approach is so far challenging, as current information has to be provided to the Joint force commander of any level at the right time with high-grade reliability. In the end, the effects based approach demands reliable network resources and network enabled capabilities at every level.



That means that, in times of developing big high level unmanned aerial systems, the tactical level might use assigned tactical unmanned aerial assets to perform full spectrum intelligence for its own purpose.

Even when a quick and dirty solution is required, the operating level must be able to collect information for its needs, especially if the network cannot deliver the relevant information demanded.

The promotion of unmanned or manned aerial systems should not be the aim of the discussion. Instead, we must look at the operational needs of the Joint Force Commander specifically in the type of operations we envisage now and in the future. In short, improving operational capability should be the driving force. Modern operational scenarios demand the benefit of state of the art technology to ensure that operational commanders can rely on the capable mixture of assets they need for a successful accomplishment of mission.