SPERWER AFTER S/A TC

Military Aviation Requirements;
an approach to address the new RNLA UAV domain

Col J. van Dijke / PL Sperwer system
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<td>See also ADM001676, UAV 2002 Conference &amp; Exhibition., The original document contains color images.</td>
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Actual situation Sperwer

As a result of S/A Certification finalised last year by the Military S/A Authority (RNLAF), and the facts that:

- Ctd S/A to be covered in a consistent way for the LOT of Sperwer,
- DM / RNLA being assigned as TCH-Sperwer,

a pragmatic approach has been chosen to cover these areas by the so-called “LE- requirements UAV” approach.
LE- requirements UAV RNLA

*(LE = military aviation requirements)*

- JAR-requirements chosen as a guideline, tailored to take into account specific military and tactical UAV conditions.

- To be issued by military authorities, being:
  * RNLAF on S/A - matters, incl. Maintenance
  * RNLA on Operational and Training matters.

- Serving as a framework for deriving from it specific Sperwer procedures and instructions, like an Operational Handbook, SOPs, SOIs, LOPs, etc.
RNLAF-LE-phylosophy

Certification
Maintenance
Utilisation
Mandates
RNLA and Sperwer

- Sperwer, first air mobile platform under operational RNLA responsibility since WW2
  - RNLA learning to become “aviation minded”

- RNLA never to be an Aviation Operator like RNLAF
- However, Sperwer a specific RNLA operational capacity for reconnaissance and intelligence.
  - Flight safety operational matters best to be implemented in a scope of “own RNLA involvement / commitment”
Audit verantwoordelijkheid

Verantwoordelijkheid

Volgt later in opname DMKLu audits tijdens toetsing LE-147

In de functie van DM als onderhoudsverantwoordelijke, tevens houder BVLn. T.z.t. moeten de BVLn overgaan naar C-1Div

Versie 1.0
07 mei 2002
Type Certificate Holdership (TCH)

- TCH responsibility and tasks covered by LE-21 as a guideline
- **TC Configuration Control Management:** with RNLA / DM as interactive linking pin between:
  - OEM (*Original Equipment Manufacturer*)
  - RNLA ‘Operator’ & ‘Maintainer’.

- **CCM activities OEM** covered by specific contract
- **CCM on Maintainer level:** interference of RNLA organic responsibilities: DM (staff level) and Maintainer (executor)
Other RNLA Constraints

Current RNLA Authorities, being Operator and Trainer
- Operating Authority $\equiv$ C - Div, being also ‘CEO’ Operator
- Training Authority $\equiv$ C-COTKL, ‘CEO’ Initial training

$\Rightarrow$ no independent Military Authorities;

RNLA Training “Ops & Maint”
: Initial- & follow-up on unit level
- initial training: skills; qualification by examination,
- Unit training: qualification for several competence levels
$\Rightarrow$ Sperwer requires specific RNLA harmonisation.
LE - OPS UAV RNLA

- To be issued by the Operational Authority

- To get a **generic UAV** reference for operational requirements, derived from many, many available documents having been produced over the last years, like:

  - TC - compliance reports,
  - Flight Performance Manual,
  - Operating Manuals of the UAV sub-systems,
  - Interim ‘Guidelines for RNLA Sperwer flight operations’,
  - Flight Authorisation Instructions (FAI’s).
LE-OPS UAV RNLA

- Some contradiction between “generic” and available basis “Sperwer documents”, otherwise said ‘Long Term’ versus ‘Short Term’.
- Harmonisation for case study “Completion of operational requirements for Sperwer UAV system” and NL Military Ops UAV framework (MLA)
- Discrepancy “content to be described” and “certain RNLA Operator levels to become aviation minded”.

Internal NL Armed Services, UAV pioneering activities contributes to:
- an evolving RNLA Operator commitment to develop a framework for “the Operational Handbook Sperwer”,
- a clear described point of departure for defining MLA LE’s on UAV.
Basis: JAR-OPS to be tailored to (military) UAV purposes

Some LE-OPS subparts N/A for UAV, e.g. subpart O (cabin crew)

Some LE-OPS subparts better match for tact UAV than others concerning weight and propulsion systems, like subpart H, performance class

Specific design characteristics unmanned air vehicle

Pragmatic approach, not too detailed, for requirements to be adapted/tailored to UAV system,

For the time being Restricted Areas only

LE-OPS UAV only applicable in peace time.
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Status OPS HANDBOOK Sperwer

- Framework defined by subpart P of LE-OPS UAV
- Compliance facilitated by a cross reference list for subjects - available doc
- To make inputs coherent and output understandable, also outside RNLA
- Working load of editors a problem (always same group! )
The main challenge for RNLA:
101 RPV bty LE- implementation to be effectuated mid 2003

- TCH and Authorities “Ops/ Training” to remain in phase, to obtain a level of acceptable readiness in sense of material and “training”, covered by a complete LE-environment, to be applied in an involved way.

- Audit by RNLAF to cover RNLA responsibilities TCH (LE-21) and Maintainer (LE-145) with Spin off to “Training” and - in consequence - to “Operator”.

- This lining-up to serve as a route planner for the implementation of the LE-structure for Sperwer
THE LE-APPROACH:

on national level

★ integrate Sperwer in a consistent flight safe way within RNLA, thereby compensating for the existing lack of experience with Army Aviation matters,

★ a basis for a flight safe application of UAV’s within the other (NL) Military services,

★ an extra dimension to embody UAV -matters within an Independent Dutch Military Aviation Authority (MLA), envisioned to be in place in 200x,

★ thereby ending the uncomfortable “two hat” position for RNLA (and RNLAF!).
THE LE-APPROACH: international level

★ it should lead to deliver information to (Military) Authorities for smoothening the access for Sperwer UAV operations to restricted airspace outside NL.

★ it could serve as a reference to harmonise regulations for UAV operations by other military users

★ Long term: input for airspace integration discussions?