

TEST PLAN PROJECT

NEW UNMANNED AIR VEHICLE FOR SURVEILLANCE OR STRIKE ROLE

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3 SEP 2013



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# **1 INTRODUCTION**

## PURPOSE

This test plan project documents (UAV) test planning for its many capabilities. The (UAV) program is an ACAT ID program and is listed on the OSD T&E Oversight List. The Joint Requirements Oversight Council (JROC) approved a Capabilities Production Document (CPD) for the (UAV) in July 2013. The CPD forms the basis of the technical requirements for the expected performance of this weapon system.

## SYSTEM DESCRIPTION

The (UAV) is a high altitude, long range, all-weather unmanned aerial vehicle used to provide intelligence, surveillance and reconnaissance with an extended strike capability. The (UAV) is equipped with sensors, cameras, aperture radar and an electronic warfare countermeasure suite. It is a powered by a single engine and can fly up to (UAV) nautical miles to its target area, loiter overhead for 60 hours then return to its origin without needing to be refueled.

# **2 MISSION NEED and OPERATIONAL REQUIREMENT**

## MISSION NEED

The CJCS and the CIA have determined that a unmanned aerial vehicles are a serious tool to the war on terror. The need exists to for 24 hour data collection, targeting and strike within the (XXX) operational arena in support of (XXX level) operations at distances of up to (XXX) from the main body of forces and to do so in near real time response to stated needs from the operational commander. Joint Force commanders seek to deploy a new survivable unmanned aerial weapon system to fill capability gaps from the aging MQ-1 Predator and the RQ1A Global Hawk.

## OPERATIONAL REQUIREMENTS

This test plan addresses the following operational requirements:

The (UAV Name) shall be flown by a 2 pilots

The (UAV Name) must be fully transportable and compartmentalized into no more than six pieces

The (UAV Name) must be transportable by a C-130

The (UAV Name) must be able to land and take off within 1000ft

Time to reassemble the (UAV Name) shall not exceed six hours

The (UAV Name) must be able to fly up to 75,000 ft

The Synthetic Aperture Radar must capable to see through haze, clouds and smoke.

The cameras must be high definition, night vision and inferred and capable of producing full motion video.

Line of site connectivity must be C-band

Beyond line of site connectivity must be Ku-band

The (UAV Name) must reach a maximum altitude of 75,000 ft

Joint Force Commanders must be able to receive radar imagery in real time

The (UAV Name) shall direct stationary and moving targets with precision guided munitions

The (UAV Name) shall neutralize an enemy radar within a 50 mile radius.

The reliability of hit the (UAV Name) precision guided munition shall be 0.99.

The reliability of kill of the (UAV Name) precision guided munition shall be 0.98.

Video/Camera/SAR shall have a combined operational availability of 0.95.

Optics must view target up to 110 km.

The (UAV Name) shall carry a payload up to 4700 lbs.

MTBF shall be 250,000 hours at a 95% CL.

(UAV Name) shall carry up to 1000 lbs of aircraft engine fuel.

(UAV Name) software maintenance shall be capable of software uploads while in flight.

(UAV Name) shall be operable in autonomous mode

Satellite connectivity must be UHF and SHF.

Flight avionics must be redundant

# **3 SCOPE AND EVALUATION**

## CRITICAL TECHNICAL PARAMETERS

## GENERAL FUNCTION AND CAPABILITY DENDRITICS

## CRITICAL OPERATIONAL ISSUES

This test plan is a roadmap to determining the operational effectiveness and suitability of the (UAV). Additionally, OT&E will determine overall mission capability of the system under realistic operational conditions and determine if the following critical operational issues have been identified:

## MEASURES OF EFFECTIVENESS/SUITABILITY AND MEASUREMENTS OF PERFORMACE

## TEST OBJECTIVE MATRIX

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| COI | Test Objectives and Sub Objectives | Test |
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## GENERAL TEST OPERATIONS AND SCENARIO OVERVIEW

## INSTRUMENTATION REQUIREMENTS

## LIMITATIONS AND SCOPE OF TEST

Real world events could not impact the availability of test assets.

# **4 OPERATIONAL EFFECTIVENESS**

SCENARIOS AND RUN PROFILES

E-TESTS

# **5 OPERATIONAL SUITABILITY**

## S-TESTS

### COMPATIBILITY

### HUMAN FACTORS

# 

# **ANNEX A: RESOURCE REQUIREMENTS**

# **ANNEX B: DATA SHEETS AND QUESTIONNAIRES**

# **ANNEX C: OMITTED**

# **ANNEX D: DATA ANALYSIS PLAN**