

Certification Statement

I, Mr. NSAC Member, the initiator of this White Paper, certify there is NO classified data, proprietary data, trade secret data, data subject to export controls, or other restricted release data.

/s/ Mr. NSAC Member
<title> Pgm Manager – Raider Industries

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IMPORTANT: Papers received without this statement will be returned.

This quadrant may be used for a **GRAPHIC REPRESENTATION** of the concept or product

STRATEGIC OBJECTIVE:

- The objective of this paper is to show that lower cost, equal quality replacement weapon parts may be produced, in the field, with a portable 3-D printer

CUSTOMER REQUIREMENT:

- The User asks for a lesser logistics footprint, lower cost and longer life for his weapons parts. These requirements may be found in Materials and Processes.

TECHNICAL OBJECTIVES:

- 1. To demonstrate that the state-of-the-art with 3-D printers is such that a standard household printer, such as is made by Black and Decker and used routinely to produce replacement knobs and other replacement parts may be used in the field to produce weapon parts.
- 2. To illustrate that by using Unobtainium in the 3-D printer, a replacement part may be produced with an infinite life that requires no lubrication or maintenance of any type; to include regular or routine cleaning.

RELATED PROJECTS:

- The only other military project using 3-D printers was a classified Navy program which has since been declassified. In this pilot program, a 3-D printer was used to produce a fully functional F-22 Raptor. This aircraft is still in use by the fleet. While no Unobtainium was used in that particular project, the raw material bins were exclusively filled with recycled metals from local landfills; thus effectively decreasing the entropy of the universe and making room for increased dumping of other materials such as benzene derivatives.

CRITICAL PARAMETERS/ RISKS AND DELIVERABLE ITEMS

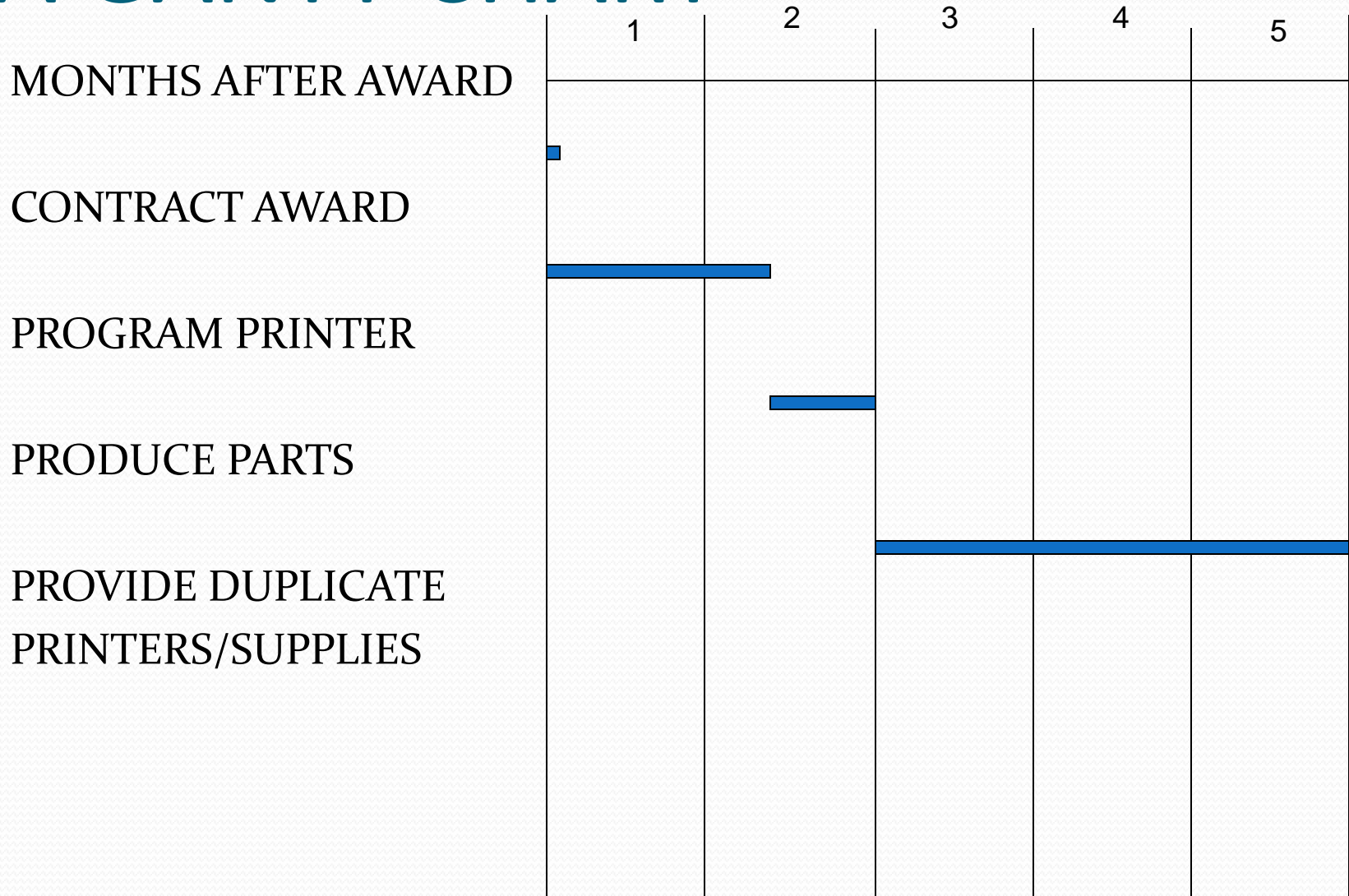
CRITICAL PARAMETERS/ RISKS:

- CAD/CAM Templates – To produce a part, the printer must have a drawing of that part formatted so that it may be understood by the internal processor. This task is easily accomplished by using the OEM fabrication drawings to produce the templates. Alternatively, an actual part may be placed on the table and scanned into memory for duplication using Unobtainium.
- Sufficient supplies of Unobtainium must be available to produce the desired part. There is an approximate 1% processing waste factor.
- The only known risk is failure of the mini-nuclear reactor providing power to the tabletop 3-D printer.

DELIVERABLE ITEMS:

- A complete set of OEM identified replacement parts for Mk 54 heavy machine gun will be manufactured from Unobtainium by both using a CAD/CAM template as well as by using a scan of these same parts done by the printer prior to duplication. Multiple sets for test are unnecessary as it is not possible to wear out a part fabricated from Unobtainium.
- Ten (10) tabletop 3-D printers, each fully programmed to produce the entire range of weapons parts for all currently fielded small arms weapons will be delivered upon contract completion.
- The raw materials bins of each of the tabletop 3-D printers will be full of Unobtainium; a supply sufficient to produce requisite weaponry to outfit a Brigade Combat Team with small arms

A GANTT CHART



Backup Data

- The weight of each tabletop 3-D printing unit is delineated as follows:
 - Printer proper, with 36" x 24" print area – 20 #
 - Unobtainium Supply – 3000 #, Specific Gravity: 0.34
 - Mini-nuclear reactor power supply – 80 #
- A complete users manual in English, Spanish, French, and Japanese is generally included at no extra cost
- The unit comes with an unconditional 90 day guarantee, free of charge. An extended service plan is available for a longer term; the fee is negotiable