APPENDIX B

SERVICE DESCRIPTION

CONTENTS

1. INTRODUCTION

1.1 Home Office Science Centre for Applied Science and Technology (CAST) has a requirement for two new portable 3D scanners.

2. PURPOSE

2.1 CAST would like to further enhance the in-house Computer Aided Engineering capability through the procurement of two new handheld 3D scanners which would offer significant advantages over the existing single scanner which has limited capabilities due to it's bench-top configuration. The purchase of two new scanners plus the associated peripherals, software and training would enhance the modern engineering product development capability of the organisation.

3. BACKGROUND TO THE AUTHORITY

3.1 CAST is a unique team of scientists and engineers at the heart of the Home Office providing expert advice, innovation and frontline support. CAST is the primary science and technology interface between Home Office ministers and policy makers, frontline delivery partners, and the suppliers of science and technology. Understanding the policy and operational context of Home Office business allows CAST to operate where others cannot for reasons of impartiality, national security or market failure.

3.2 CAST's expertise and activities are focused into capability areas that serve the range of Home Office interests in: contraband detection, crime prevention and community safety, cyber, forensics, identity assurance, protective security, public order and surveillance.

4. BACKGROUND TO REQUIREMENT/OVERVIEW OF REQUIREMENT

4.1 The purpose of this procurement is to further enhance CAST's existing Computer Aided Engineering capability which is necessary to undertake advanced engineering, product development, manufacturing and forensic work.

4.2 CAST's Computer Aided Engineering capability is dependant on the ability to 3D scan real objects and bring the digital data into the CAD environment, for manipulation, redesign or reproduction.

4.3 This is a capability the organisation currently has but which is limited to a single bench-top unit which can only scan objects which are placed within the unit for scanning, this restricts the capability to small items and the technology is not portable.

4.4 It is proposed CAST purchases two new portable 3D scanners, each being suited to scanning larger parts (5 – 50 cm and 30 – 300 cm) in situ which would dramatically enhance CAST's in-house 3D scanning capability, meanwhile remaining compatible with the existing bench-top scanner and software. The ability to reverse engineer parts is a powerful one for a design engineer. It enables the rapid and accurate input of 3D data into CAD model space, therefore saving considerable remodelling time and ensuring dimensional accuracy.

5. SCOPE OF REQUIREMENT

5.1 CAST requires a package consisting of two scanners, a laptop containing the compatible software and operator training as defined below:

5.2 Scanner 1:

5.2.1 Portable, hand-held scanning system designed for parts 5 – 50 cm in size

5.2.2 Up to 550,000 points per second

5.2.3 0.1mm to 0.3mm accuracy, depending on part size

5.2.4 Up to 0.1mm resolution

5.2.5 LED light projection (eye safe)

5.2.6 Weight not to exceed 1kg

5.2.7 Output formats to include as a minimum: STL & OBJ

5.2.8 Ability to capture colour and texture

5.2.9 Output of texture data for design and graphic processing

5.2.10 Carry case

5.2.11 External battery pack

5.3 Scanner 2:

5.3.1 Portable, hand-held scanning system designed for parts 30 – 300 cm in size

5.3.2 Up to 550,000 points per second

5.3.3 0.1mm accuracy with 0.3mm/m accuracy

5.3.4 Up to 0.5mm resolution

5.3.5 LED light projection (eye safe)

5.3.6 Weight not to exceed 1kg

5.3.7 Output formats to include as a minimum: STL & OBJ

5.3.8 Ability to capture colour and texture

5.3.9 Output of texture data for design and graphic processing

5.3.10 Carry case

5.3.11 External battery pack

5.4 Workstation laptop or computer optimised for use with the scanners, including any required software packages.

5.5 Service and calibration contract for three years.

5.5.1 The products are to be serviced and calibrated annually as part of a scheduled service plan; the products are to be serviced and calibrated either on site or sent to the supplier. The first service and calibration shall take place 12 months after the units have been used and at 12 month intervals thereafter. The date shall be specified by the customer to the single point of contact 4 weeks prior to the service date.

5.5.2 The service contract shall cover the repair of the units on a call-out basis in the event of device malfunction or failure.

6. SERVICE LEVELS AND PERFORMANCE

6.1 The scanners and associated products are required by 01st February 2016, the suppliers will be evaluated on their ability to deliver by the date.

6.2 The annual service and calibration shall ensure the units are restored to the manufacturers default settings unless otherwise agreed at the time of service between the engineer and the user.

6.3 In the event of a unit failure the supplier shall investigate the issue within 5 working days of receiving units (if the units are returned for repair) or send an engineer to site within 5 working days of being notified.

7. ADDITIONAL REQUIREMENTS / INFORMATION

7.1 Packaging and delivery to CAST.

7.2 Training for three members of CAST staff either at CAST or the supplier's premises.

8. LOCATION

CAST
Woodcock Hill
Sandridge
St Albans
Hertfordshire
AL4 9HQ

9. SECURITY REQUIREMENTS

9.1 CAST is a secure site and therefore any visitors are escorted at all time whilst on site. Anyone entering the site by vehicle may be subjected to a vehicle search and photographic identification is required.