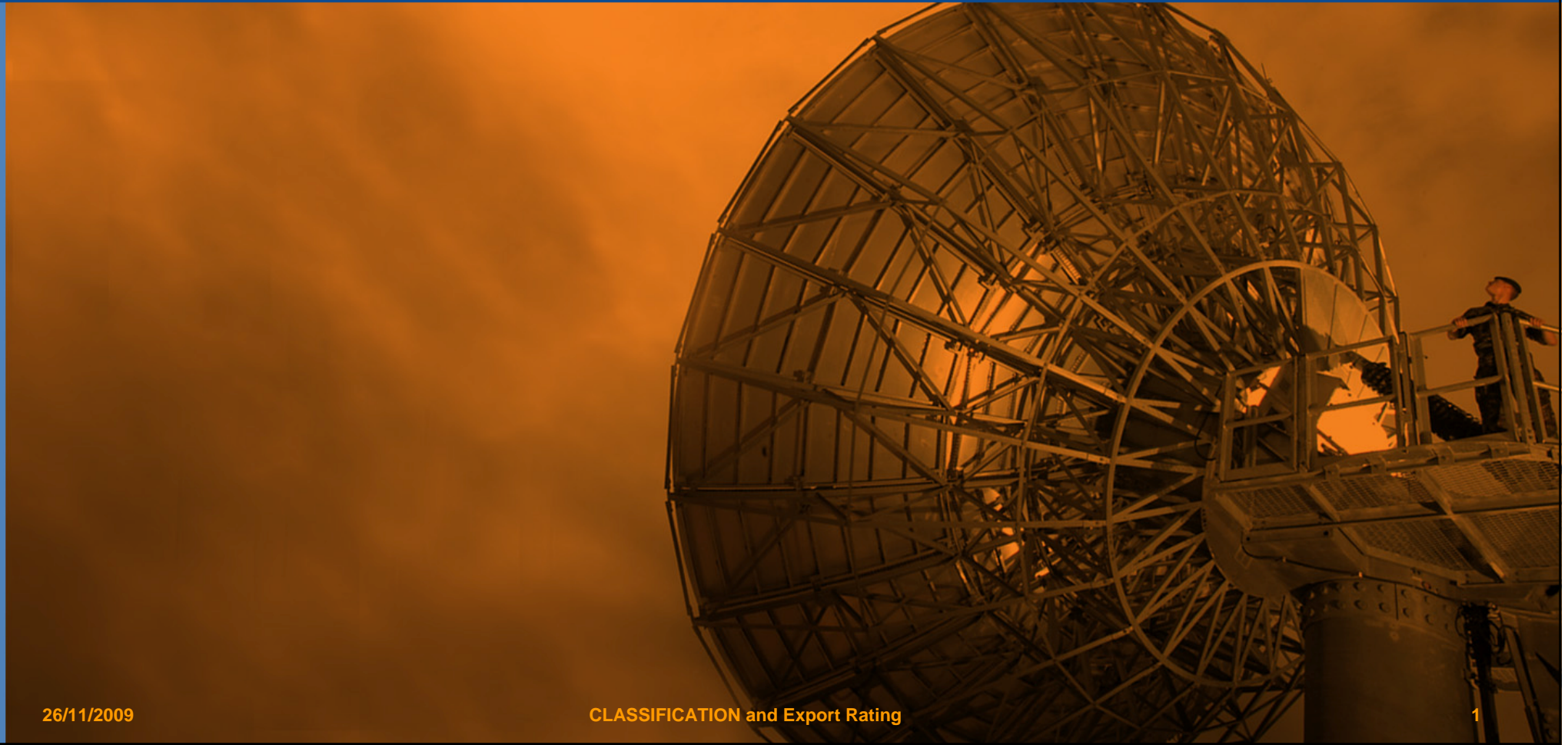




# Paradigm HITS ISO Background Briefing

## December 2009



## Objectives

- **Who are Paradigm?**
- **Overview of HITS System Design**
- **Overview of the Site Survey Process for HITS Sites**

## Paradigm

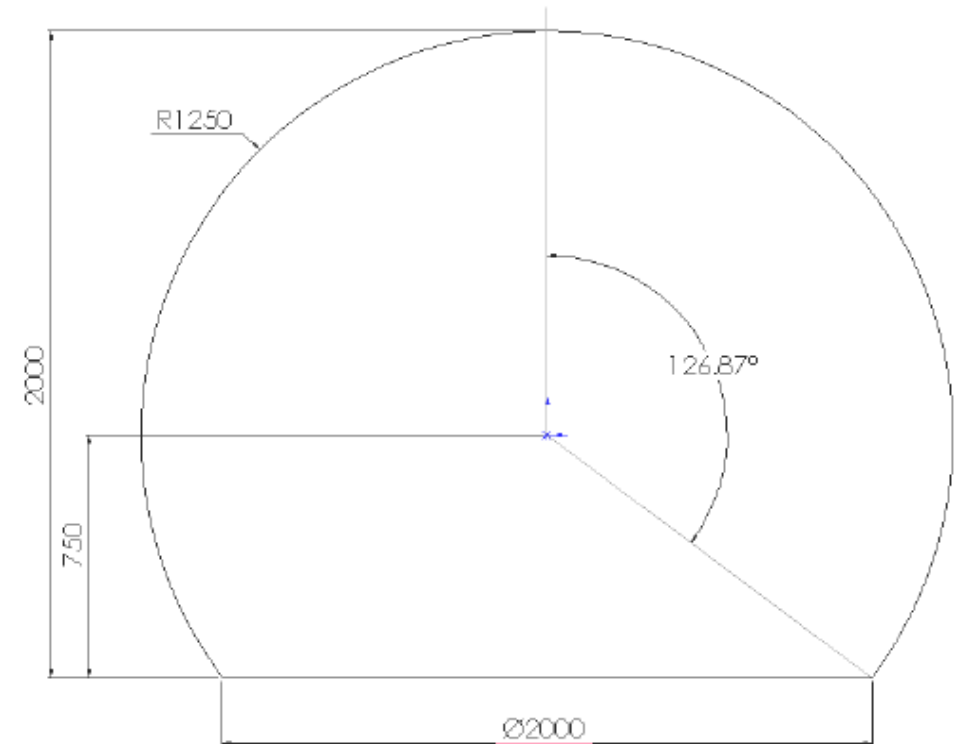
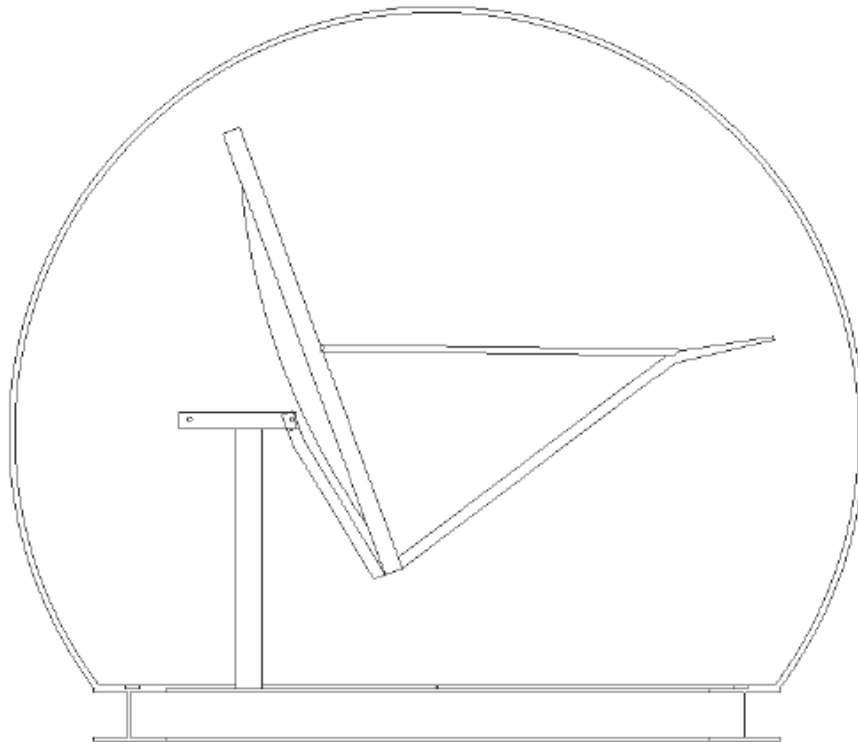
- **Paradigm supplies military hardened satellite communications, primarily to the UK armed forces but also to a range of other governments and organisations around the world.**
- **Paradigm was established to deliver the Skynet 5 service for the UK armed forces, as part of an innovative and sophisticated £3.6 billion PFI (Private Finance Initiative) arrangement. Paradigm is wholly owned by EADS, the European Aeronautic Defence and Space Company.**
- **Paradigm has been responsible for the provision of WelComE (Welfare Communications Everywhere) services to the UK MoD since September 1999 and has provided over a million hours of welfare telephone calls since 2003.**

## System Design

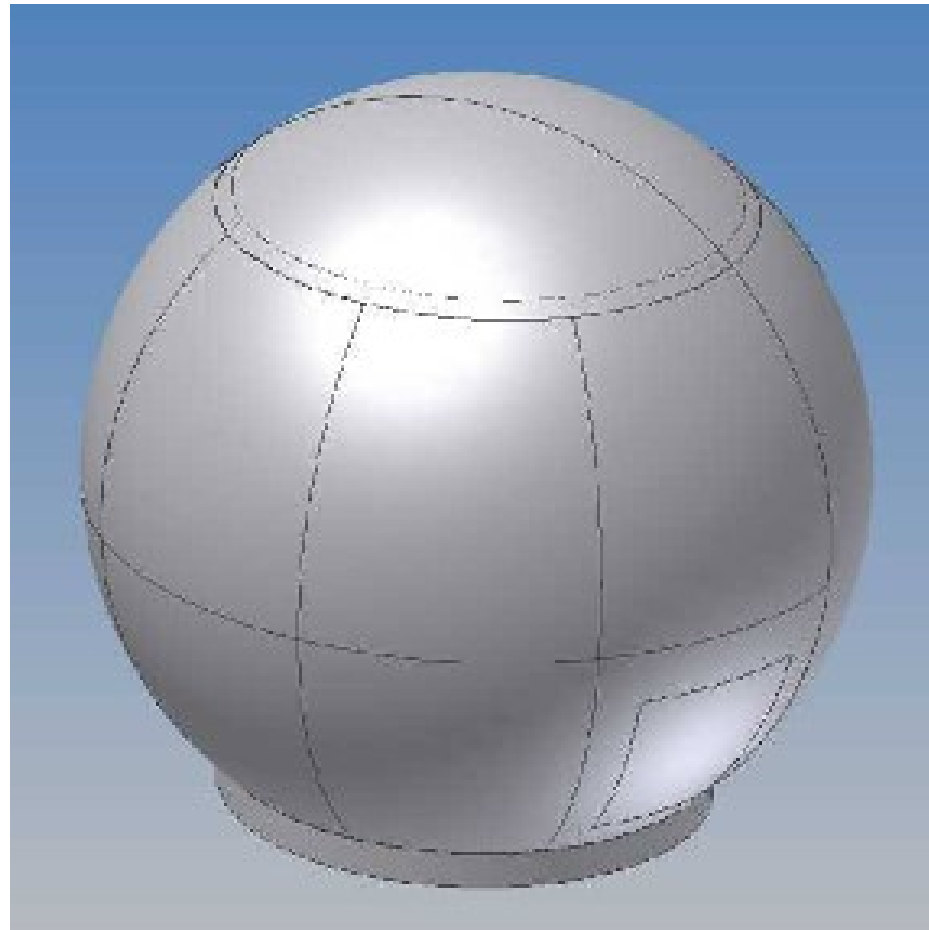
- **HITS Installation Variants:**
  - Hybrid
  - Boxed
  - Terrestrial
- **Paradigm are also providing Qty 3 HITS Transportable Systems, which can be called off iaw HITS USOPs.**

## Radome

- Radome weight – approx 400Kg
- Add 100Kg for weight of VSAT



# Radome



## Non Penetrating Roof Mount



- **Ballast is dependant on height of building.**
- **eg 3 storey building 90mph winds – 329Kgs plus 100kg for equipment**

## CCT 120 Terminal



- **Stored on Site.**
- **Deployed by User.**
- **Training will be provided at Paradigm Training School, Oakhanger.**

## Equipment Rack



- **27U Equipment Rack.**
- **42U can be supplied if requirement identified at Site Survey.**
- **Existing Site Rack may be utilised, if identified and agreed at Site Survey.**

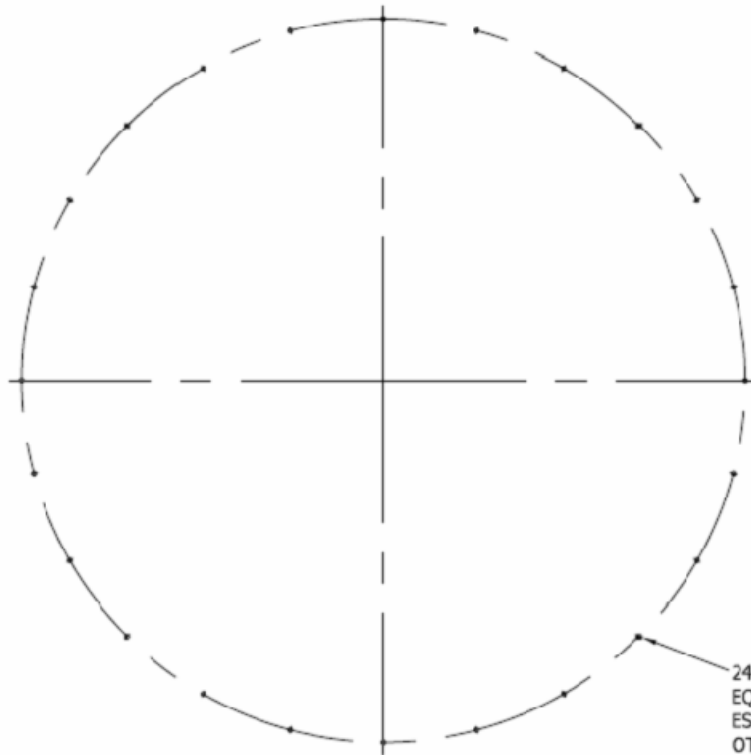
# Radome – Ringbeam Mounting Direct

THE ENGINEER RESPONSIBLE FOR INSTALLATION TO ESTABLISH :

- 1) WIND SPEED APPLICABLE TO RADOME SITE LOCATION, ELEVATION & SITUATION (MUST BE  $< 65 \text{ ms}^{-1}$ ).  
ALANDICK RECOMMEND THAT A DUE ALLOWANCE IS MADE FOR ROOFTOP TURBULENCE WHERE APPLICABLE / LIKELY.
- 2) ANCHOR BOLTS SUITABLE FOR LOADS & SUPPORT STRUCTURES.

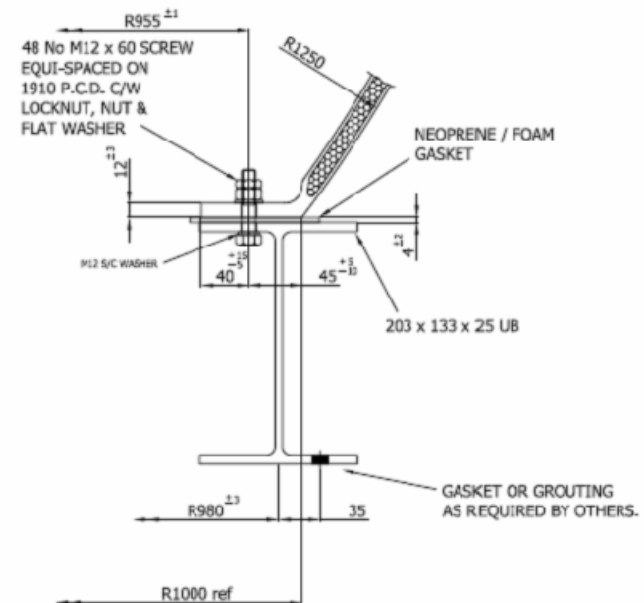
ALL LOADS ARE ROUNDED	RADOME ONLY	RADOME, RING BEAM, FLOORING & POLE FOR DISH
WEIGHT	120 kg	430 kg
DESIGN WIND SPEED ONTO RADOME	65 $\text{ms}^{-1}$	
LIFT (EXCLUDING WEIGHT)	10.4 kN	10.4 kN
DRAG	3.6kN @ UNDERSIDE OF RADOME BASE FLANGE	5kN @ UNDERSIDE OF RING BEAM BASE FLANGE
OVERTURNING MOMENT	2.7kNm @ UNDERSIDE OF RADOME BASE FLANGE	3.6kNm @ UNDERSIDE OF RING BEAM BASE FLANGE

UNFACTORED

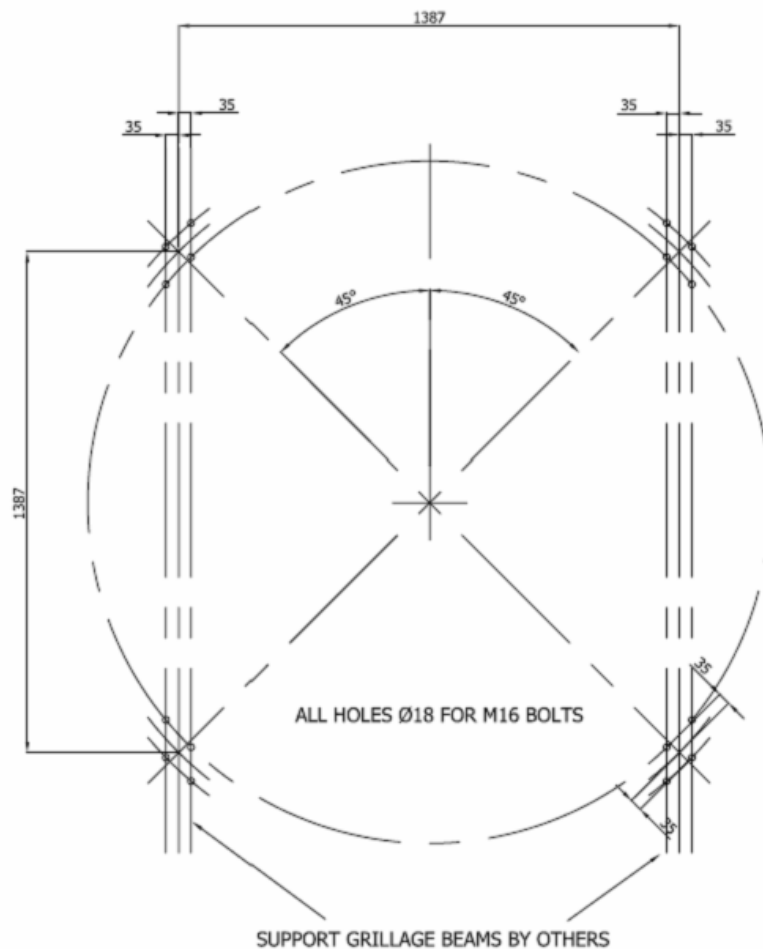


RING BEAM FOOTPRINT

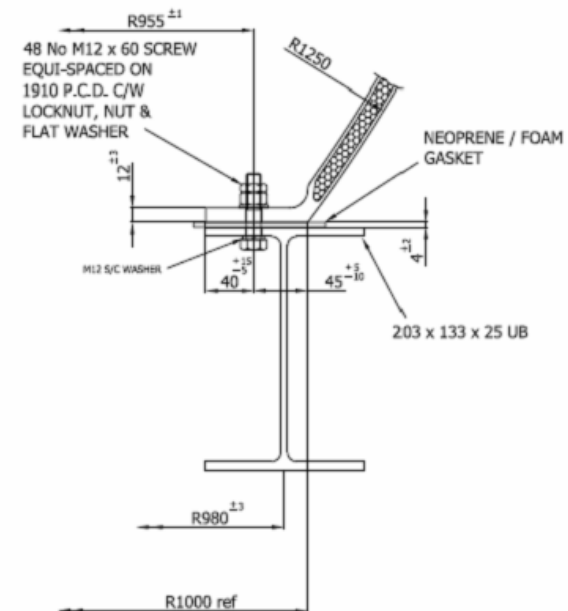
24 No M12 ANCHOR BOLTS  
EQUI-SPACED ON 2030 P.C.D.  
ESTABLISHED & INSTALLED BY  
OTHERS.  
(RING BEAM WILL HAVE  $\varnothing 14.0$  HOLES)



# Radome – Ringbeam Mounting I-Beams



ALL LOADS ARE ROUNDED	RADOME ONLY	RADOME, RING BEAM, FLOORING & POLE FOR DISH	
WEIGHT	120 kg	400 kg	UNFACTORED
DESIGN WIND SPEED ONTO RADOME	65 ms <sup>-1</sup>		
LIFT (EXCLUDING WEIGHT)	10.4 kN	10.4 kN	
DRAG	3.6kN @ UNDERSIDE OF RADOME BASE FLANGE	5kN @ UNDERSIDE OF RING BEAM BASE FLANGE	
OVERTURNING MOMENT	2.7kNm @ UNDERSIDE OF RADOME BASE FLANGE	3.6kNm @ UNDERSIDE OF RING BEAM BASE FLANGE	FACTORED
MAX TENSION ON RADOME ANCHOR BOLT			
MAX SHEAR ON RADOME ANCHOR BOLT			



## Site Survey - Contractors

- **Paradigm has selected Serco to provide the following services:**
- **Dedicated HITS Project Team to provide:**
  - Site Surveys
    - Site Survey reports with Installation Plans
    - Installation
  - Enduring Support to each Installation with surge capacity to meet ‘emergencies.’ Serco have contracted Phoenix to complete this support.
- **C&W contracted to Paradigm as provider of VPN network**

## Customer Support

- **Paradigm Customer Contact Centre (PCCC) will be first point of contact post Site Commissioning**
- **Support Contract provides a 9 hour fix, subject to certain parameters, after fault is reported.**