SPACEVR

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Introduction

- Problem
- Solution
- Content
- VR Industry
- Business Model
- Engineering Results

Problem
Space is out of reach.
$1.7 Billion per Month
$4 Million per Month
$2.99 per Month + $10K option

Solution

Overview One

3U+ CubeSat
8448 x 3156
X-Band Tx
S-Band Rx/Tx
TK1 CPU/GPU
15.3 W
120 Wh
Patch Antennas
0.007° Star Tracker ADCS

EDGE MOUNTED DEPLOYABLE SOLAR CELLS

9.8 dB Downlink Margin

24 dB Uplink Margin

ISS Deployment

3U+ Volume

I hate solar cells

+Z Side View
SCALE 0.5 : 1

CubeSat Right Hand Reference Frame:
↑ +Z-Axis
↙ +X-Axis
↘ +Y-Axis

+X Side View
SCALE 0.5 : 1

+Y Side View
SCALE 0.5 : 1

(+X & +Y Side) Isometric View
SCALE 0.5 : 1

DRAWN B. Sanders	3/1/2016	SpaceVR
CHECKED		TITLE
QA		Concept of Operations (CONOPS)
MFG		
APPROVED		
		SIZE C · DWG NO Overview One Mark VIII · REV VIII
		SCALE · SHEET 1 OF 4

Content
100
unique experiences
at 400 m per pixel resolution

VR Industry and Distribution

Virtual Reality
Active Users

Today
200,000

2018
180,000,000

Business Model

Virtual Reality Space Content

Consumer	Enterprise	Licensing
Mobile & Web	Schools, Museums, Companies	Research, News, Games
$29.99/year or $2.99/month	$1,000 -$10,000 /month (User Based)	$500,000+ (Single Time)
1300 Users Already	50 Schools + 2 Museums interested	TOP SECRET

Engineering Results

360 degree stitch of SF Bay Bridge

No tripods in space…

Engineering Results

360 degree stitch @ 18.2 km / 60K feet

www.vrideo.com/spacevr

Pass Prediction

Elevation Mask	Usingen, DE	Brisbane, AU	Brewster, WA (USA)	Fairbanks, AK (USA)	Southland, NZ	TOTAL COVERAGE
10°	29.4	17.6	30.5	0.0	32.8	110.3
20°	15.8	7.4	16.7	0.0	17.8	57.6
30°	9.4	3.4	9.9	0.0	9.7	32.4
40°	5.9	1.7	5.6	0.0	4.3	17.6
50°	3.7	0.9	2.5	0.0	2.2	9.3
60°	2.2	0.5	1.2	0.0	1.0	4.8

Table 1 - 30 day downlink time

4.66 GB of content per day

10 to 100 MBits/Second

Live VR not possible yet…

Power Analysis

5 Modes of Operation:

- Camera Mode (Video)
- Transmit Mode (X-Band)
- Scouting Mode (Stills)
- Free Fly Recharge Mode
- Recovery Mode (4.5 hrs)

Instantaneous Power:

- 37 W - X-Band Radio (4% Duty Cycle) via 5A @ 7.4V
- 7 W - K1 CPU/GPU (100% Duty Cycle) via 0.6A @ 12V
- 5 W - Two 4K cameras (3% Duty Cycle) via 1A @ 5V
- 4 W - Attitude Determine & Control System (50% Duty Cycle)

WE ARE HIRING

Linux Embedded Software Engineer

Experienced Systems Engineer

DEAR TMRW. BRING IT ON...

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$30.00

SPACEVR

The future of space exploration is virtual reality.

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