



Physical Characteristics:

Circumference: 10,921 km (around equator)

Surface Area: 3.793×10^7 km²

Mass: 7.347×10^{22} kg

Equatorial rotation velocity: 4.627 metres per second

Average orbital speed: 1.022 km per second

Orbital period: 27 days 12 hours 44 minutes 2.9 seconds

The Moon

1:10 000 000

This project was primarily an exercise in georeferencing and dealing with the difficulties that result when mosaicking numerous rasters together. The images used were of such high resolution and quality that they had to be significantly reduced in cell size when rectifying. The main challenge with these particular rasters was the angle of light that fell on each individual area. This was significantly different for each and required extensive clipping to avoid extremely shadowed areas from being present in the final assembly.

Clipping often left large holes in areas that had previously been covered and as such, it took many more rasters to compensate for the lost areas. This often meant a huge amount of overlap for a single sliver that was left bare.

Overall, the crater data proved crucial in the alignment and identification. Without them it would have been impossible to have an end result that was anywhere close to accurate. Though, inaccuracies are inherent to georeferenced images.

When all 52 rasters were georeferenced, clipped, downsampled, and overlaid in an appropriate way, it became evident that the clip boundaries of each image were very easy to distinguish. Though hours in CorelPhotoPaint using various blurs and blends, nothing more gratifying was possible. Stitching provided a more pleasing alternative to the stark edges, but unfortunately the raster size still prevented the program from being able to function and it only took 5 rasters to crash it completely.

In the end, exporting them without mosaicking together (which also took 4-8 hours to complete) was the best that could be made of the situation given the time frame and resources at hand.

Text placement was applied following the export and removal of jagged edges around the outer edges of the planet.

Sources:

All rasters from: The Consolidated Lunar Atlas, Lunar and Planetary Institute.
<http://www.lpi.usra.edu/resources/cla/maps/thumbs/>

Lunar crater data obtained from:
<http://host.planet4589.org/astro/lunar/Craters>

Identification of craters aided by: The Full Moon Atlas
 The Lunar Navigator, Interactive Maps of the Moon:
<http://www.lunarrepublic.com/atlas/index.shtml>

Referenced *Near Side of the Moon* by Ralph Aeschliman to confirm text placement.

The Moon