

JSatOrb: SatOrb in Java, based on Orekit

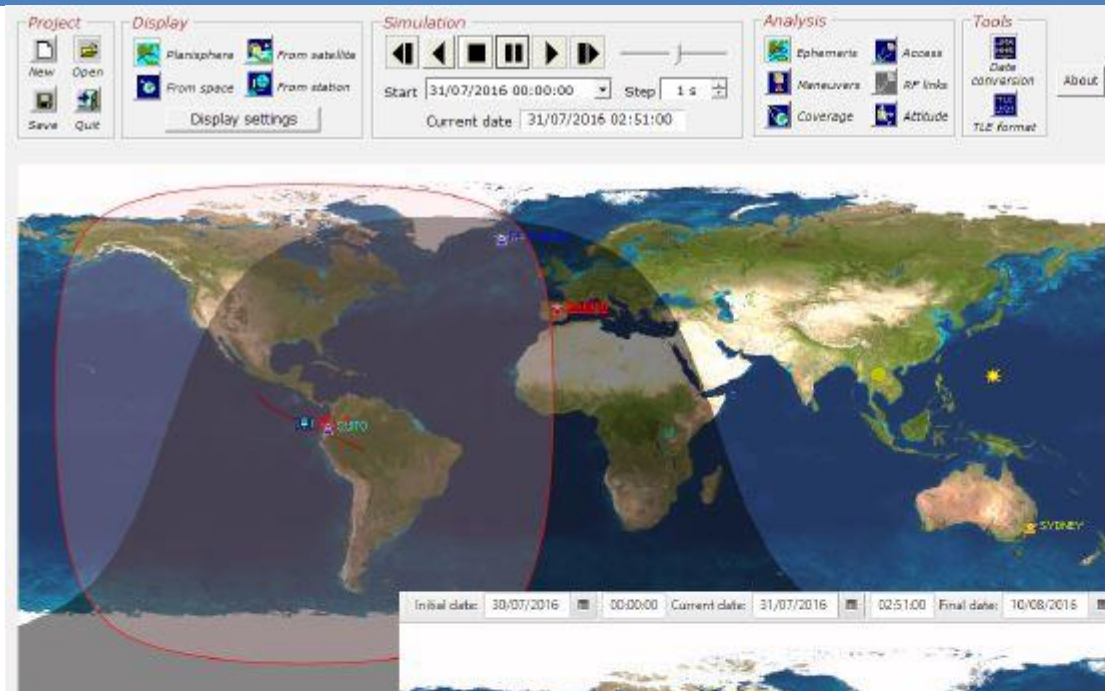


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Under the responsibility of
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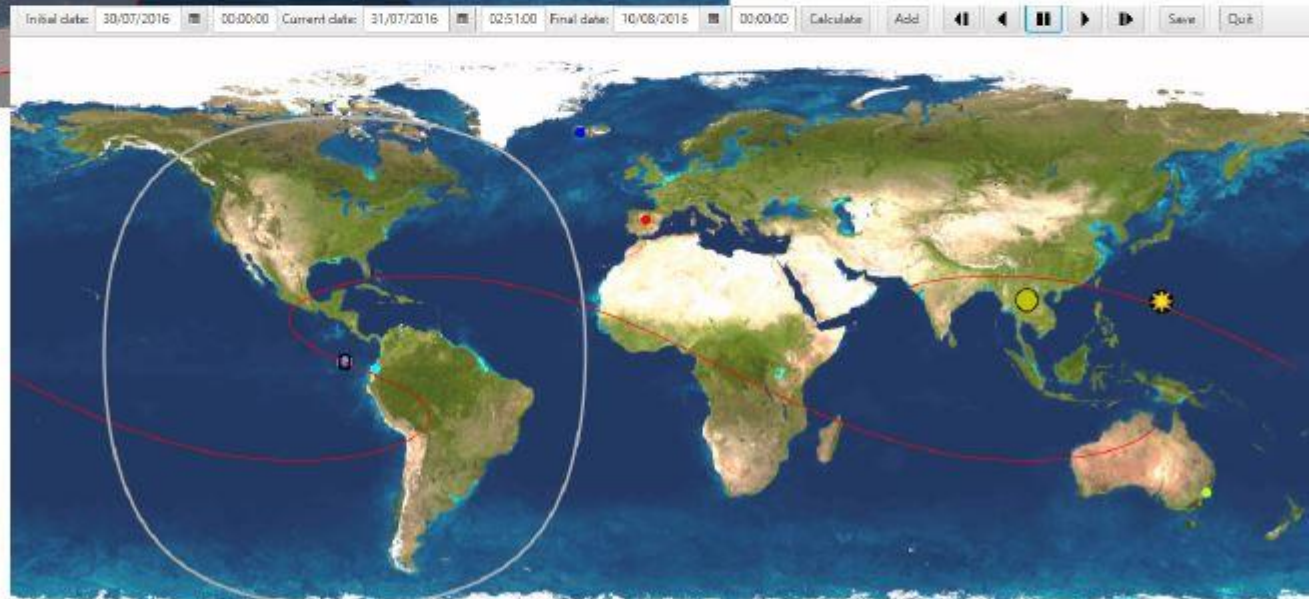
The idea



From Satorb...

Microsoft®
VB.net

... To
JSatorb

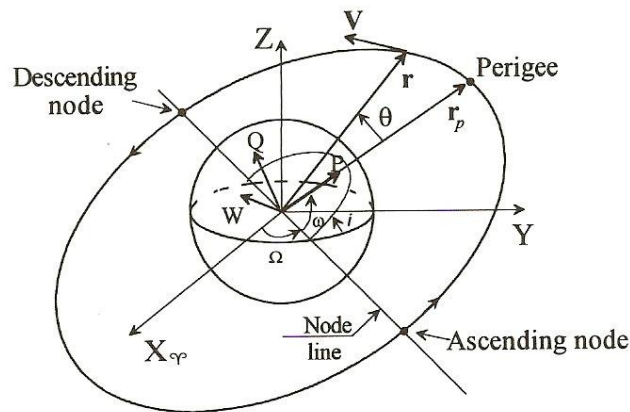


Create the germ of JSatOrb, a version of SatOrb in Java

Student-focused
learning tool

Professional software
for researchers

Implement a clear division in the coding



Calculations

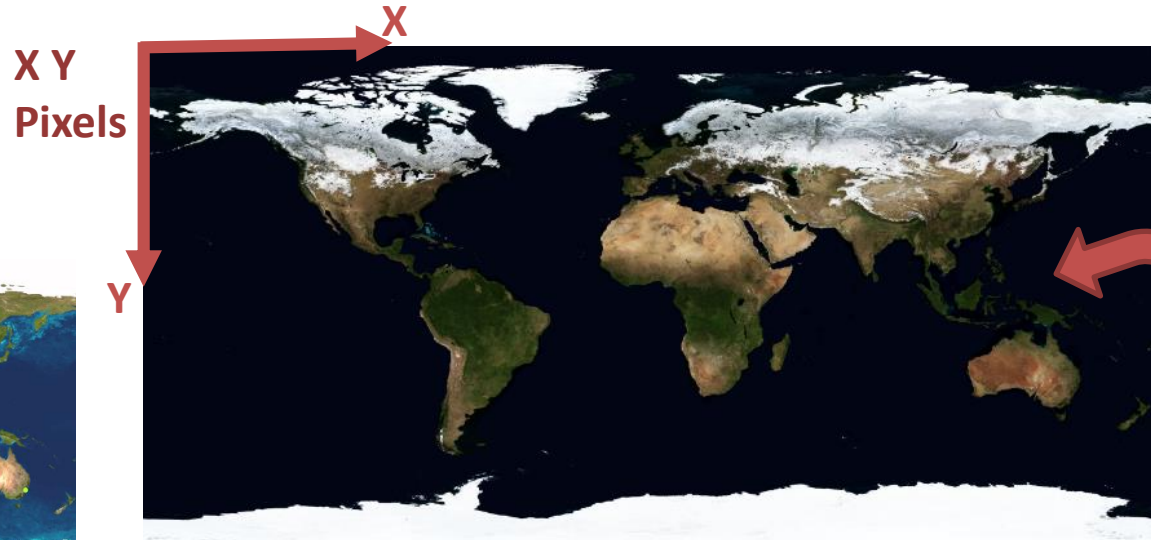
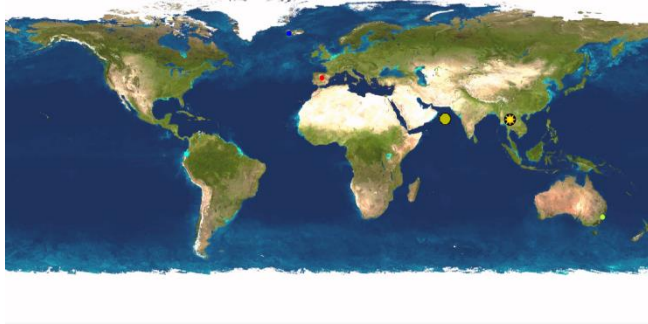


User interface

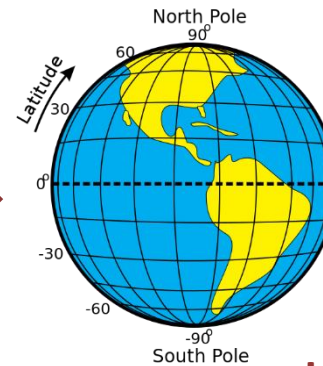
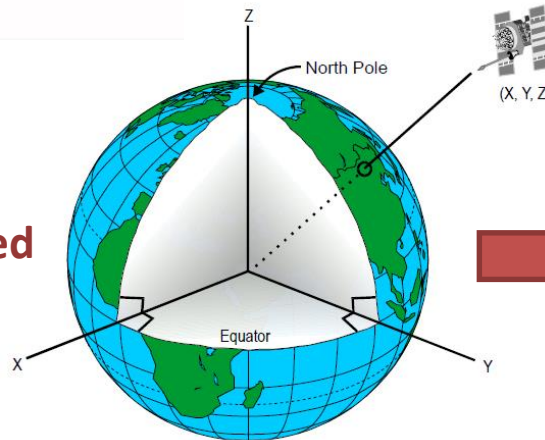


Feature type	Software Features	SatOrb	OreKit	JAT	TUDAT	CelestLab
Visualization	Terminal	✓	✓	✓	✓	✓
	2D (planisphere)	✓	-	✓	-	✓
	3D (Earth)	✓	-	✓	-	-
Ephemeris	Position/Velocity	✓	✓	✓	✓	✓
	Keplerian Parameters	✓	✓	✓	✓	✓
	Eclipses	✓	✓	✓	✓	✓
Manoeuvres	Impulse	✓	✓	✓	✓	✓
	Continuous	-	✓	✓	✓	✓
Time	UTC	✓	✓	✓	✓	✓
	TAI	-	✓	✓	✓	✓
	Julian	✓	✓	✓	✓	✓
	NORAD	✓	-	-	-	-
Propagators	Kepler	✓	✓	✓	✓	✓
	Brouwer	✓	-	-	-	-
	Mosaif	✓	-	-	-	-
	SGP4/SDP4	✓	✓	✓	-	-
	Central	-	✓	✓	-	✓
	Lyddane	-	-	-	-	✓
	Eckstein-Hescher	-	✓	✓	-	✓
	Cohessy Wiltshire	-	-	✓	✓	✓
Others	TLE Format	✓	✓	✓	✓	✓
	Coverage	✓	✓	✓	-	✓
	Constellations	✓	-	-	-	-
	Ground stations	✓	✓	✓	✓	✓
	Links	✓	-	-	-	-
	Language	VisualBasic	Java	Java	C++	Scilab

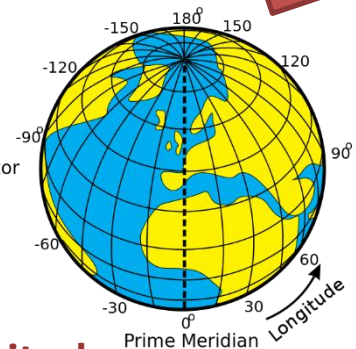
- Planisphere view



**Earth
Centered
Inertial**

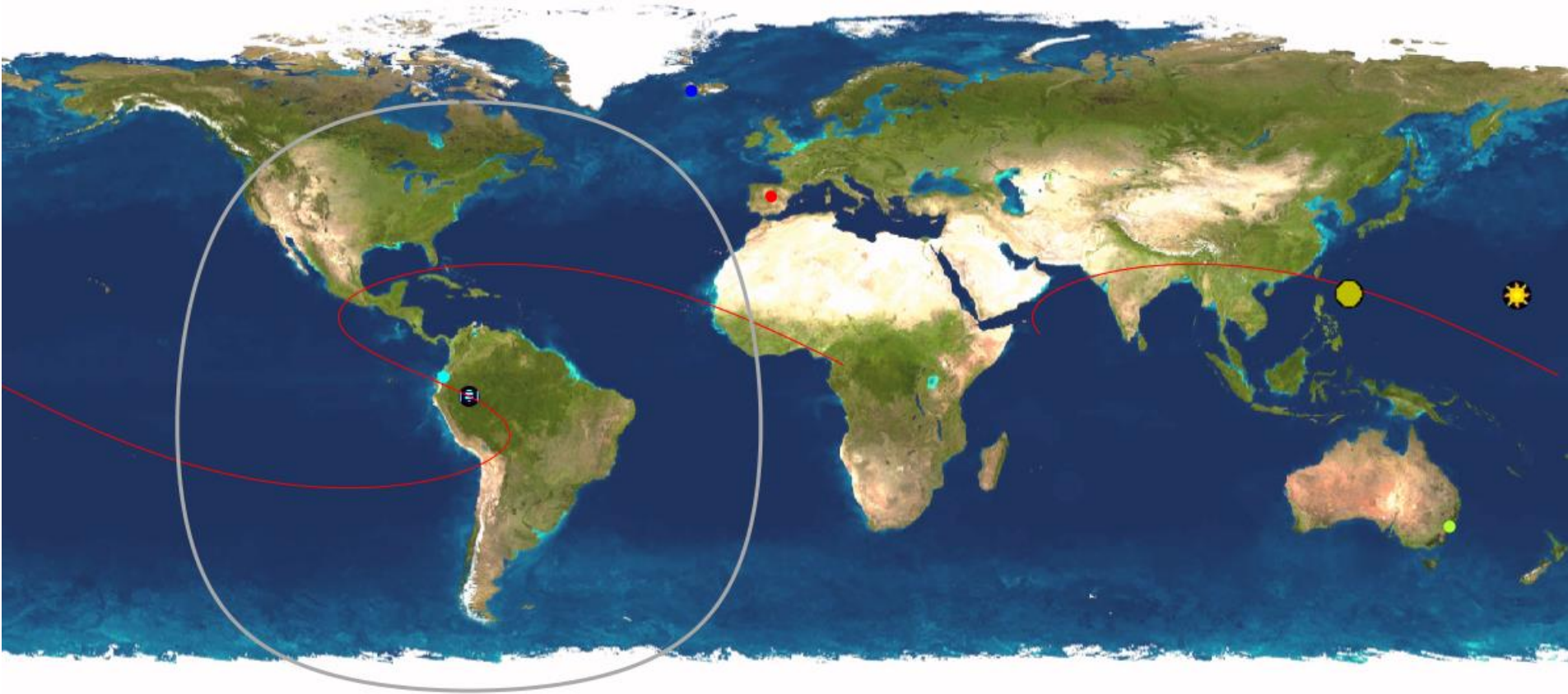


**Longitude
Latitude**



- Ground stations, Sun and Moon

- Groundtracks, satellites and visibility circle





- Successful germ of JSatOrb
- Further development: (lots of work ahead!)

3D view

Track visualization

Allow to add orbits

Keep copying SatOrb

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