



Interactive Tours in Marble

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Agenda

- What are tours?
- How are they represented technically?
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- The Tour Widget
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What are tours?

Touring enables controlled flights through geospatial data, including:

- specific flight durations between locations
- smooth flight past locations, without stopping
- playing sound files at predefined times during the tour
- temporary updates to KML features within the bounds of the tour

These can have various use-cases, few of them being:

- a tour of the top ten highest skyscrapers in the world
- a tour of the capitals of the top ten most populated countries in the world
- a tour of all the locations of probe landings in the moon,
- etc., etc.



How are they represented technically?

- Tours are constructed by placing specific elements, in order, into a KML file, and are made up of a series of tour primitives -
 - FlyTos,
 - Waits,
 - TourControls,
 - AnimatedUpdates,
 - SoundCues.
- Some of these primitives are played one after the other, waiting for one primitive to complete before beginning the next. Others run parallel to other primitives, so that multiple actions can occur simultaneously.



Serial Tracks vs Parallel Tracks

Primitives that occur in series:

- `<gx:FlyTo>`
- `<gx:Wait>`
- `<gx:TourControl>`

These primitives take place one after the other, and must be fully complete before the playlist moves on to any other element, of any type.

Primitives that occur in parallel:

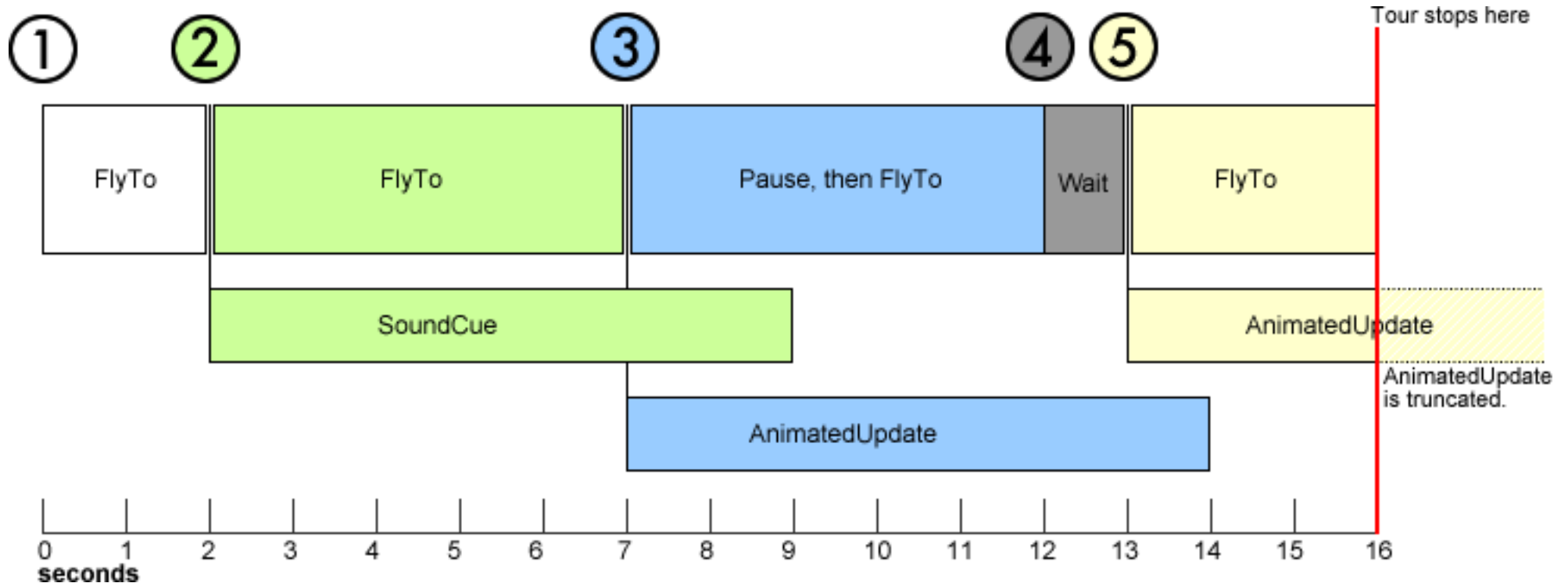
- `<gx:AnimatedUpdate>`
- `<gx:SoundCue>`

These primitives, once they are started, the playlist immediately moves on to the next primitive, without waiting for the SoundCue or AnimatedUpdate to complete.



Serial Tracks vs Parallel Tracks

The following diagram gives a good idea about the difference between Serial and Parallel Tracks.

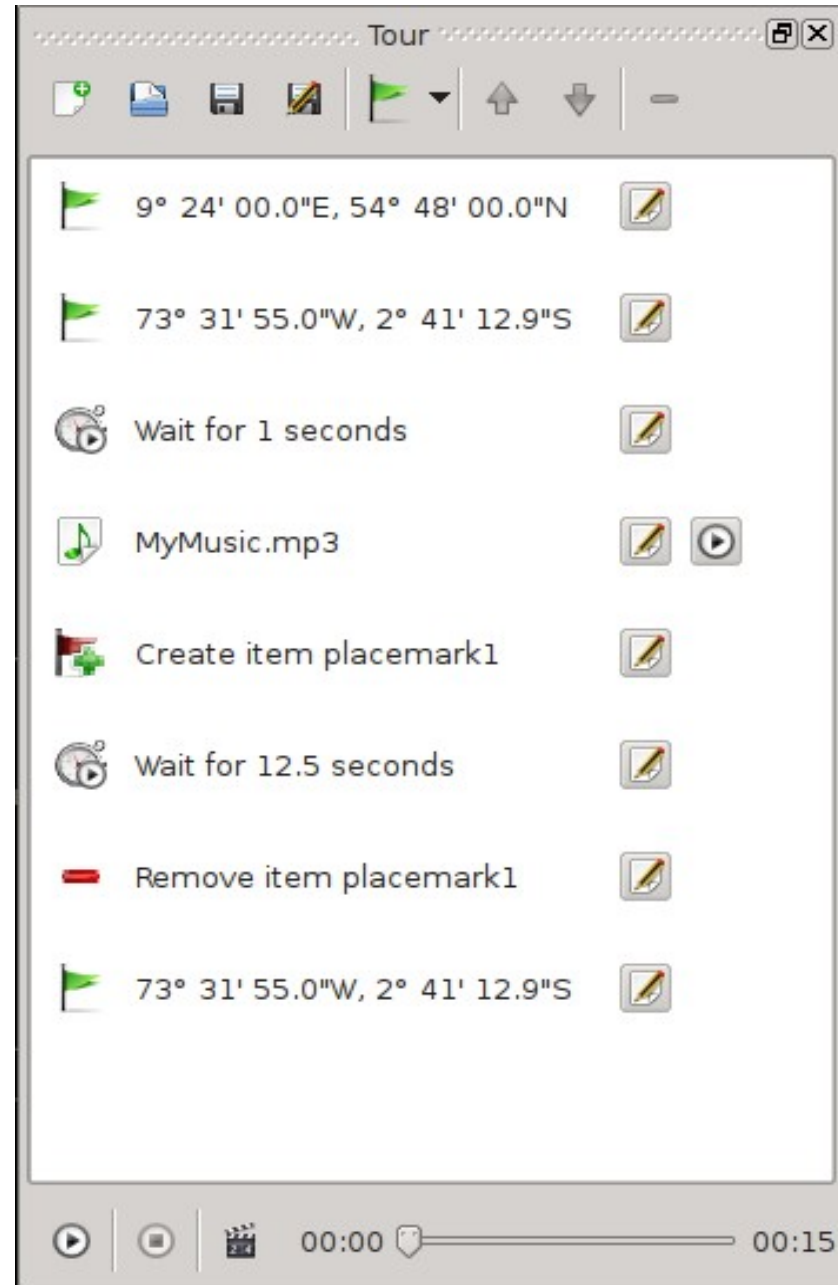




The Tour Widget

The Tour Widget is from where all operations regarding tours are done in Marble, and it looks somewhat like this ->

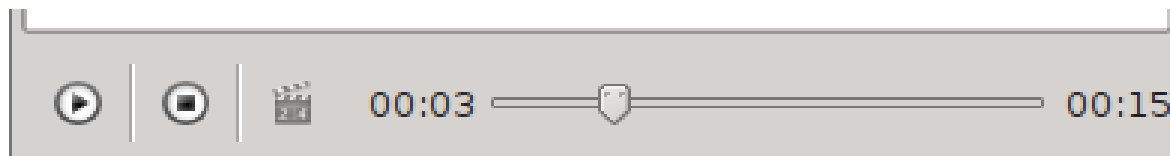
As you can see from the snapshot, there are options on the top for creating, saving, modifying the tour, followed by the playlist showing the different items present in it, along with an *Edit* option for each, and finally, the playback options at the very bottom along with the progress-bar, and the option to save the tour as a movie file.





The Tour Playback

As you can see in the following pic, at the bottom of the Tour widget, there are options to Play / Pause / Stop the tour. Also, by looking at the progress-bar towards its side, you can understand what's the total duration of the tour, how much of it has already elapsed, and how fast the playback is progressing. Infact, you can slide the bar to the left or right to get an immediate real-time change in the map depending on the tour playlist and how the bar is moved by the user.

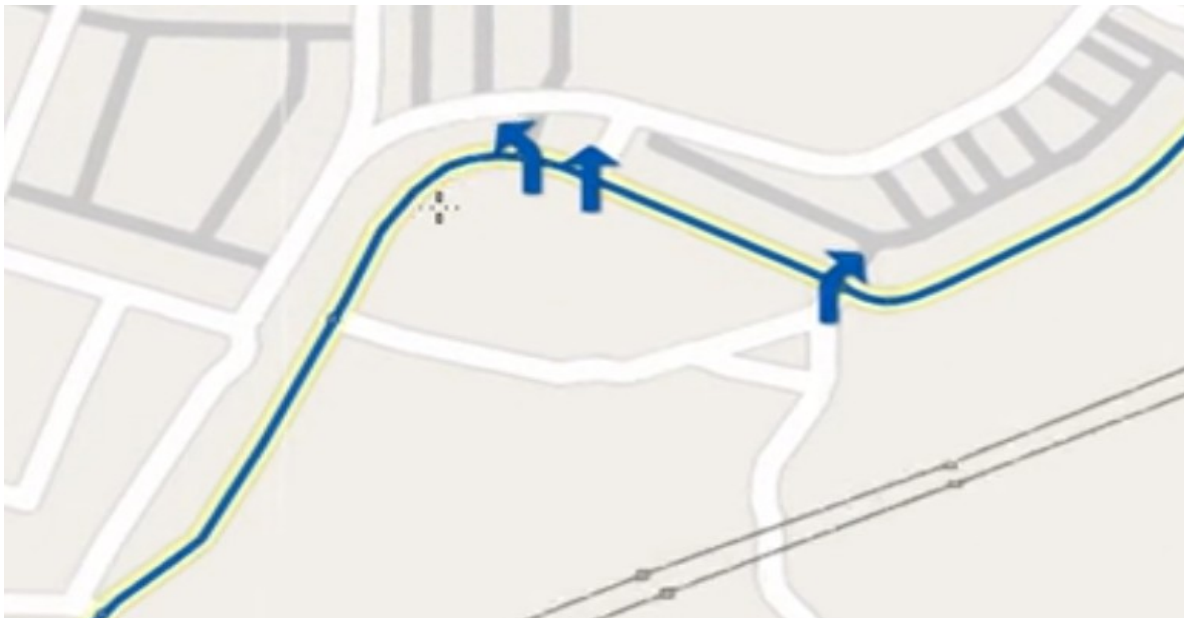


The icon just to the left of the progress-bar is for converting the tour into a movie file, and it will be discussed in one of the later slides.



View a route as a tour

You can even view a route as a tour, and the option for that is present in the Routing widget, as “Preview Route” as shown on the right. On clicking it, a nicely animated tour showing the route, with wayward arrows (as shown below) starts playing on the map, and it is pretty cool to watch.



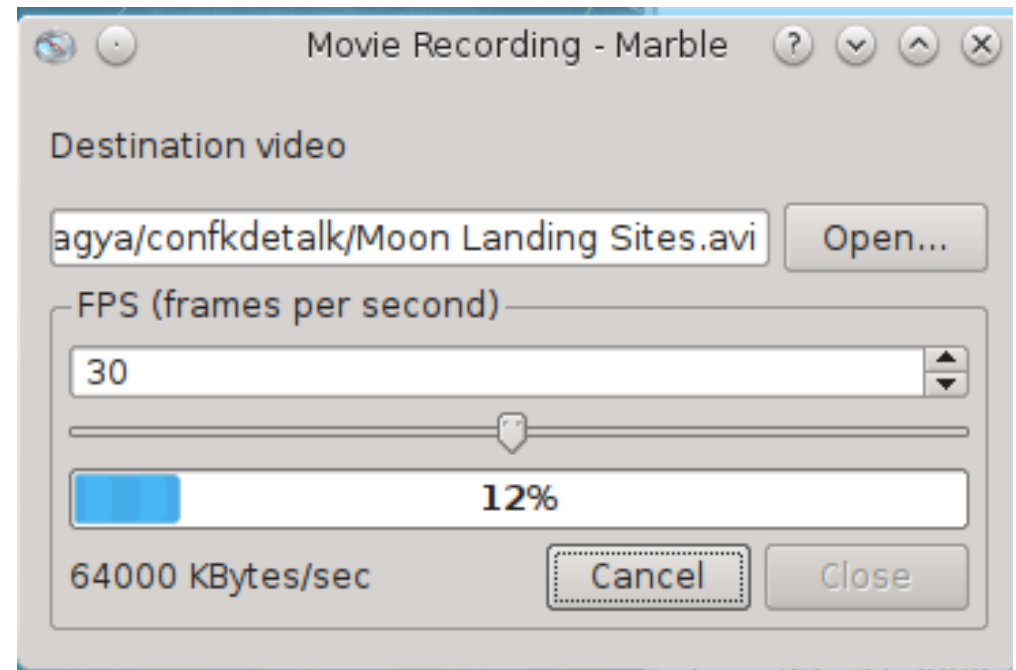
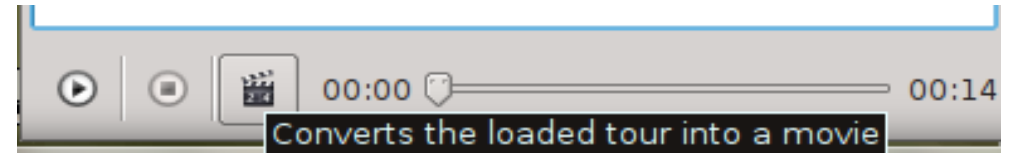
A screenshot of the Routing widget interface. At the top, it shows the start point 'A' as 'NH19, Durgapur' and the end point 'B' as 'Raniganj, West Bengal'. The mode is set to 'Car (fastest)'. There is a 'Get Directions' button and a status 'routes found: 1'. Below this is a toolbar with icons for print, save, play, zoom in, zoom out, and search. A 'Preview Route' button is highlighted. The main area shows a list of instructions: 'A Head (northwest) onto', 'Keep slightly left on onto NH19.', 'Continue on onto NH14, 19.', 'Turn left into onto NH14.', and 'B Turn left.'. At the bottom, it shows the total distance and time: '31.0 km; 00:26 h (OSRM)'.



Convert a tour into a video file

As I mentioned in the previous slides, there is an option in the bottom of the Tour widget for converting the tour into a video file.

On clicking on that, we get a dialog, where we can choose the fps rate, and the video file to save the movie in. Clicking on *Start*, the conversion starts taking place in the background. The progress along with the bitrate is shown towards the bottom of the dialog. Once the progress reaches 100% the file is saved, and the video is ready for playback from the local hard drive using VLC or any other player of your choice.





Join the community

Official site: <http://marble.kde.org>

IRC channel: #marble

Mailing list: marble-devel@kde.org



Questions?