SpatiaLite v.2.4.0 – Release Candidate 2

Routing facility Addendum

Starting from **v.2.4.0-RC2** the SpatiaLite's Routing facility [**VirtualNetwork**] is changed, because two different Shortest Path algorithms are now supported.
You can choose between:
- the classic **Dijkstra**'s algorithm [already implemented in previous versions]
- the **A*** algorithm [this algorithm applies _heuristic_ assumptions, and in many cases may be noticeably faster then Dijkstra]

Important notice: you can still continue safely using any Network generated by previous SpatiaLite's version.

Anyway, only the Dijksta's algorithm can be supported when using old-format Networks.

So, be aware: in order to use the A* algorithm you must rebuild from scratch any Network related struct using v.2.4.0-RC2.

Building a Network:
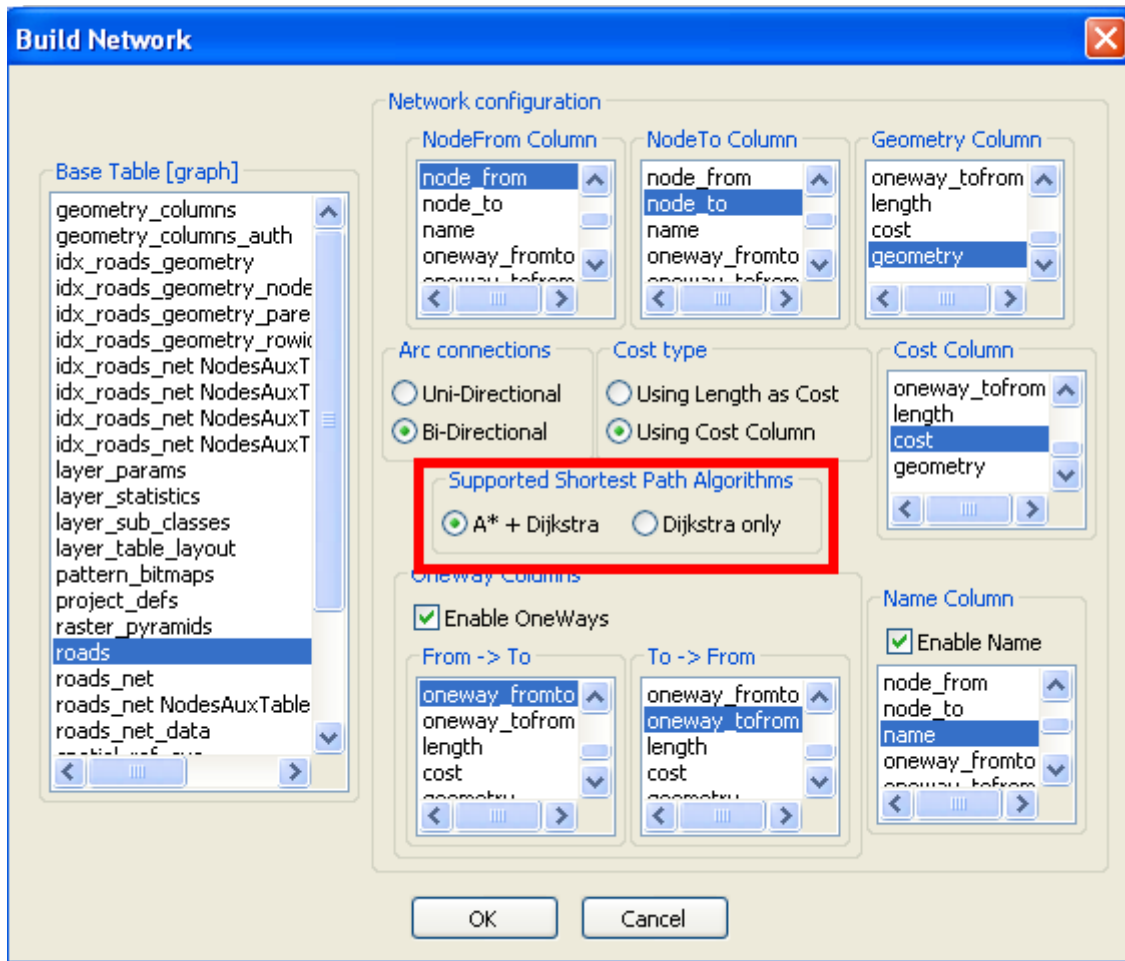
While creating a Network using v.2.4.0-RC2 you can:
- support the Dijkstra's algorithm only
  - this option produces a VirtualNetwork fully compatible with previous SpatiaLite's versions
- support both algorithms [Dijkstra's and A*]
  - using this option requires a small extra-space: not so much, anyway

The same option is available for the CLI tool **spatialite_network** as well.

<u>Querying a VirtualNetwork table</u>:

Submitting a Routing request is exactly the same as in previous versions:
```
SELECT *
FROM roads_net
WHERE NodeFrom = 9200418 AND NodeTo = 251369545
```

But using v.2.4.0-RC2 the returned resultset is slightly different:

Algorithm	ArcRowid	NodeFrom	NodeTo	Cost	Geometry
Dijkstra	NULL	9200418	251369545	17.939336	LINESTRING
Dijkstra	3	9200418	277357928	6.402357	NULL
Dijkstra	4	277357928	260914932	3.568285	NULL
Dijkstra	5	260914932	251369545	7.968694	NULL

As you can notice, a new **Algorithm** column is now returned [corresponding to the algorithm actually used for the current routing solution]

<u>Please note</u>: by default the Dijksta's algorithm is the currently selected one.

You can switch from one algorithm to the other simply executing:
```
UPDATE roads_net SET Algorithm = 'A*'

or

UPDATE roads_net SET Algorithm = 'Dijkstra'
```

<u>Please note</u>: the above statement is effectless if the underlying VirtualNetwork doesn't actually supports the A* algorithm.

And you can check wich one algorithm is currently selected performing the following query:
```
SELECT algorithm FROM roads_net
```

That's all, folks