

Robotics Systems Types - Feature #2438

BayesNetwork protos

11/20/2015 12:13 PM - V. Richter

Status:	Resolved	Start date:	11/20/2015
Priority:	Normal	Due date:	
Assignee:	J. Moringen	% Done:	100%
Category:	Type Proposal	Estimated time:	0.00 hour
Target version:			
Description			
I would like to add prototypes describing a bayesian network and a corresponding observation.			

Associated revisions

Revision 77a25a90 - 11/25/2015 11:16 AM - V. Richter

Added Bayes{Variable,Network[Evidence]} message types

fixes #2438

- proto/sandbox/rst/bayesnetwork/BayesVariable.proto: new file; variable in a Bayes network
- proto/sandbox/rst/bayesnetwork/BayesNetwork.proto: new file; description of Bayes network equivalent to the XMLBIF Format
- proto/sandbox/rst/bayesnetwork/BayesNetworkEvidence.proto: new file; the observed state of a BayesNetwork at a specific time or time span

Signed-off-by: Jan Moringen <jmoringe@techfak.uni-bielefeld.de>

Revision b592d469 - 11/25/2015 11:34 AM - V. Richter

Added Bayes{Variable,Network[Evidence]} message types

fixes #2438

- proto/sandbox/rst/bayesnetwork/BayesVariable.proto: new file; variable in a Bayes network
- proto/sandbox/rst/bayesnetwork/BayesNetwork.proto: new file; description of Bayes network equivalent to the XMLBIF Format
- proto/sandbox/rst/bayesnetwork/BayesNetworkEvidence.proto: new file; the observed state of a BayesNetwork at a specific time or time span

Signed-off-by: Jan Moringen <jmoringe@techfak.uni-bielefeld.de>

History

#1 - 11/20/2015 01:39 PM - J. Moringen

- Status changed from New to In Progress
- Assignee set to J. Moringen

Reviewing ...

#2 - 11/24/2015 12:17 PM - J. Moringen

- *File changes.diff added*

Minor changes are attached.

Discussion-worthy:

- Should the property fields be key-value collections (as suggested in the attached patch)?
- Since there seems to be no relation to other types in the *rst.graph* package and the new types would just as well fit into *rst.inference* (if we actually had that), maybe a separate package *rst.bayesnetwork* would be better?

#3 - 11/24/2015 03:01 PM - V. Richter

J. Moringen wrote:

| *Discussion-worthy: - Should the property fields be key-value collections (as suggested in the attached patch)?*

The XMLBIF works with string properties of undefined format so using a key-value collection would hinder the interoperability with the existing format.

```
<PROPERTY>size 12</PROPERTY>
<PROPERTY>comment Trial number ten</PROPERTY>
<PROPERTY>position = (154, 241)</PROPERTY>
```

| *- Since there seems to be no relation to other types in the *rst.graph* package and the new types would just as well fit into *rst.inference* (if we actually had that), maybe a separate package *rst.bayesnetwork* would be better?*

I used the *rst.graph* package because a bayes network is a graph. What about *rst.graph.bayesnetwork*?

#4 - 11/25/2015 09:37 AM - J. Moringen

- *% Done changed from 0 to 50*

V. Richter wrote:

| *The XMLBIF works with string properties of undefined format so using a key-value collection would hinder the interoperability with the existing format.*

OK.

| *I used the *rst.graph* package because a bayes network is a graph. What about *rst.graph.bayesnetwork*?*

I understand. My argument was that Bayesian networks should get their own package since they cannot simultaneously be contained in the multiple domains (graph, inference, graphical model, stochastics) they belong to.

#5 - 11/25/2015 10:33 AM - V. Richter

I used the rst.graph package because a bayes network is a graph. What about rst.graph.bayesnetwork?.

I understand. My argument was that Bayesian networks should get their own package since they cannot simultaneously be contained in the multiple domains (graph, inference, graphical model, stochastics) they belong to.

That is a good point. In this case the rst.bayesnetwork package would be okay.

Could you change that? I do not know how to apply your diff to my project :-)

#6 - 11/25/2015 10:34 AM - J. Moringen

V. Richter wrote:

That is a good point. In this case the rst.bayesnetwork package would be okay.

Could you change that? I do not know how to apply your diff to my project :-)

Sure.

#7 - 11/25/2015 11:20 AM - V. Richter

- Status changed from In Progress to Resolved

- % Done changed from 50 to 100

Applied in changeset commit:rst-protol77a25a9079a447aded99dca15f350038d54772cc.

Files

0001-Add-a-BayesNetwork-proto-description.patch	4.82 KB	11/20/2015	V. Richter
0002-Add-BayesNetworkEvidence-proto.patch	1.95 KB	11/20/2015	V. Richter
changes.diff	6.93 KB	11/24/2015	J. Moringen