1 TS PADI Data Retrieval

In R, the functions in this package are made available with

```
> library("padi")
```

As of R-2.1.0 the code from the vignette that generates this guide can be loaded into an editor with *edit(vignette("padi"))*. This uses the default editor, which can be changed using *options()*. Also, it should be possible to view the pdf version of the guide for this package with *print(vignette("padi"))* and the guide for the dse bundle with *print(vignette("dse-guide"))*.

This section describes utilities for retrieving data from an online database. This has been implemented using the TS PADI interface. The examples use series names which are specific to the Bank of Canada.

Building a database plug will typically require some programming effort. This effort can be reduced by using a standardized interface. Code and a description of a prototype of a standard for a Time Series Protocol for Application - Database Interface (TS PADI) is available at http://www.bank-banque-canada.ca/pgilbert. The code includes a working interface to a Fame database.

(This interface is getting to be fairly old and, although it still works, some of the underlying code should probably be replaced with a newer approach to standardized interfaces.)

Data is retrieved with a description which gives an indication of where the data comes from, which series are model inputs and which are model outputs, any transformations which should be applied to the data, and some padding information indicating whether the series should be padded with NAs to the length of the longest available series or truncated to the subset where all data is available for all series. Data is retrieved by using the generic function freeze() on the description. When freeze() is a applied to an object which is already time series data then the data is simply returned. When applied to a data description object the data is retrieved from the data base. Most of the functions in the DSE library use the function freeze() on data, so data descriptions can be used interchangeably with data. For model estimation purposes it is usually desirable to retrieve the data and work with a fixed data set, but once a model is established and is routinely used with newly available data then the data description is more convenient.

The following simple example specifies the series *V14182897* from the *ets* server as the single output series.

```
> if (checkPADIserver("ets")) manuf.prod <- getpadi("V14182897",
      server = "ets")
```

Here is a multivariate example:

```
> if (checkPADIserver("ets")) eg.data <- getpadi(c("P100000", "V37124",
      "V122487", "V122620", "V36382", ), server = "ets")
```