A package on Robust Kalman filtering

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We want to discuss a proposal on an implementation of Robust Kalman filtering based on `S4` classes. To do so, we are geared to the existing implementations of the Kalman filter from the basic R distribution (cf. [5] and [1]) as well as from the bundle `dse` (cf. [2]). By means of the `setOldClass` mechanism (cf. [5]), we register existing `S3` classes from these implementations as `S4` classes and extend them for our purposes. As generic functions we will present implementations of the classical Kalman filter, the ACM filter from [3], and the rLS-filter from [4].

References:

[1]. Durbin, J. and Koopman, S. J.(2001): *Time Series Analysis by State Space Methods.* Oxford University Press.

[2]. Gilbert, P. (2005): Brief User's Guide: Dynamic Systems Estimation (DSE). Available in the file `doc/dse-guide.pdf` distributed together with the R bundle `dse`, to be downloaded from `http://cran.r-project.org`

[3]. Martin, D. (1979): Approximate conditional-mean type smoothers and interpolators. In *Smoothing techniques for curve estimation, Proc. Workshop, Heidelberg 1979*, Lect. Notes Math. 757, p. 117-143

[4]. Ruckdeschel, P. (2001): Ansätze zur Robustifizierung des Kalman Filters. Bayreuther Mathematische Schriften, Vol. 64.

[5]. R Development Core Team (2005): R:*A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. `http://www.R-project.org`
