APPENDIX D
THE FUNCTION RLS

function h = rls(varargin)
% RLS  Recursive least-squares FIR adaptive filter.
%    H = ADAPTFILT.RLS(L,LAMBDA,INVCOV,COEFFS,STATES) constructs an FIR
%    RLS adaptive filter H.
%    %
%    L is the adaptive filter length (the number of coefficients or taps)
%    % and it must be a positive integer. L defaults to 10.
%    %
%    LAMBDA is the RLS forgetting factor. This is a scalar and should lie
%    % in the range (0, 1]. LAMBDA defaults to 1.
%    %
%    INVCOV is the inverse of the input signal covariance matrix. This
%    % matrix should be initialized to a positive definite matrix.
%    %
%    COEFFS vector of initial filter coefficients. It must be a length L
%    % vector. COEFFS defaults to length L vector of all zeros.
%    %
%    STATES vector of initial filter States. It must be a length L-1
%    % vector.
%    % STATES defaults to a length L-1 vector of all zeros.
%    %
%    % See also ADAPTFILT/ALGORITHMS.
%    %
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%    Copyright 1999-2005 The MathWorks, Inc.
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h = adaptfilt.rls;
construct(h,[0 5], 'Direct-Form FIR RLS Adaptive Filter', varargin{:});