Overlap-Save Method

In this method the input data sequence is split into blocks of length N samples defined as $N = L + R$. Each block of length N consist of overlapping last $R - 1$ samples of the previous block followed by L new samples. Then, the an N-point FFT is computed for each data block. Then, the multiplication of N-point FFT and the transfer function is performed, followed by IFFT operations to obtain the time-domain block signal. Since the data block is of length N, the first $R - 1$ samples of the output are corrupt by the aliasing. Thus, these initial samples are then discarded, and only the error-free $N - R$ samples are saved in the output record. It is important to emphasize that in the beginning of processing the first R samples are set to zero. In the figure below is illustrated an example of overlap-add method with $R = \frac{N}{2}$ and $L = R$.