Pulse Shaping and Matched Filtering

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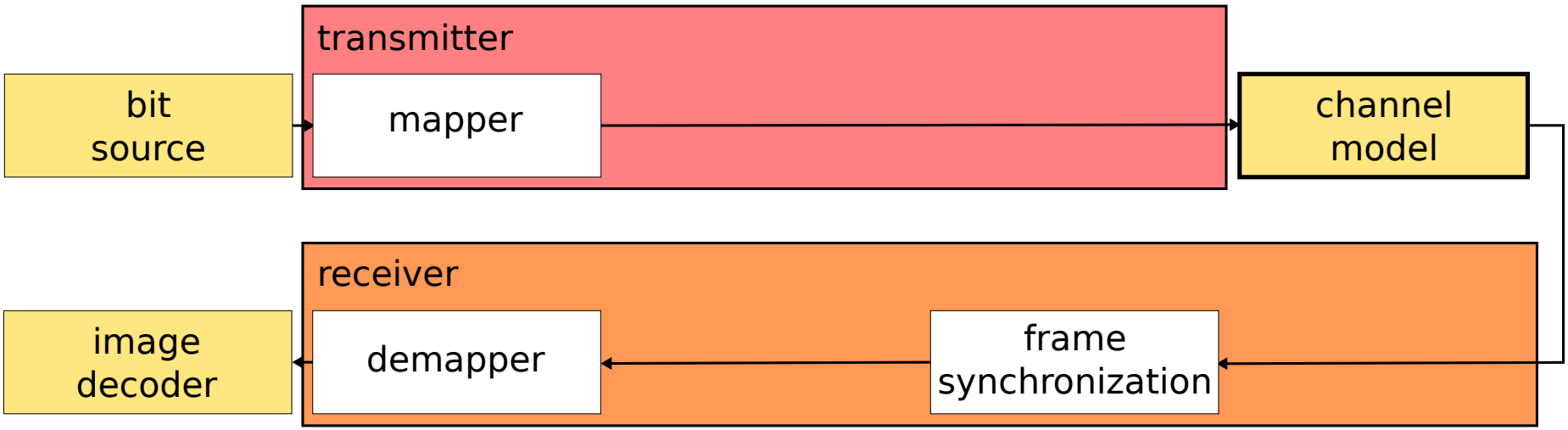
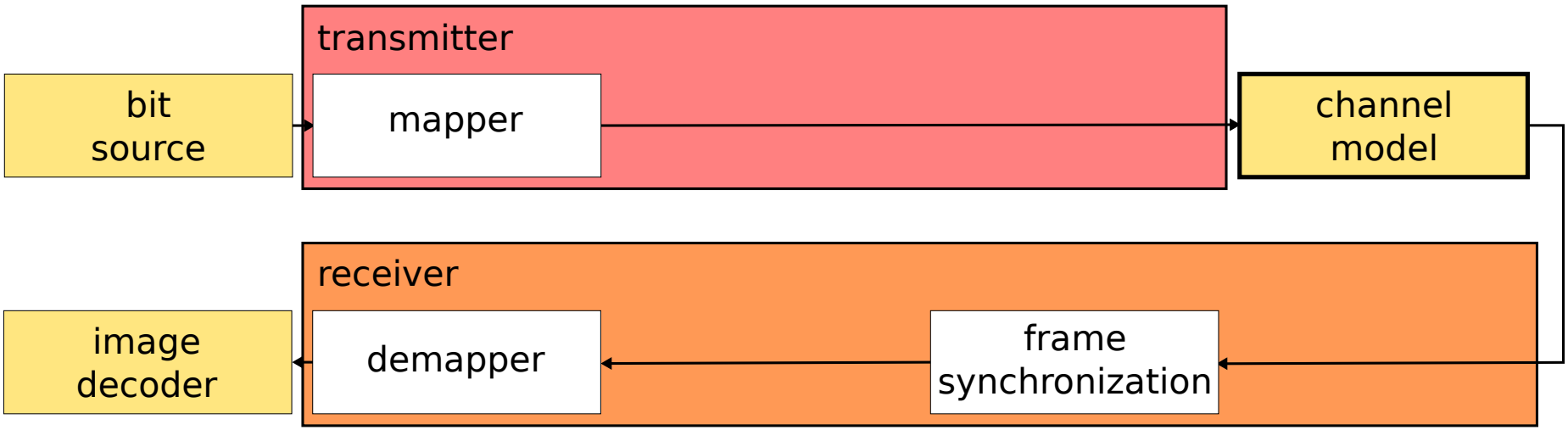
What you have implemented so far

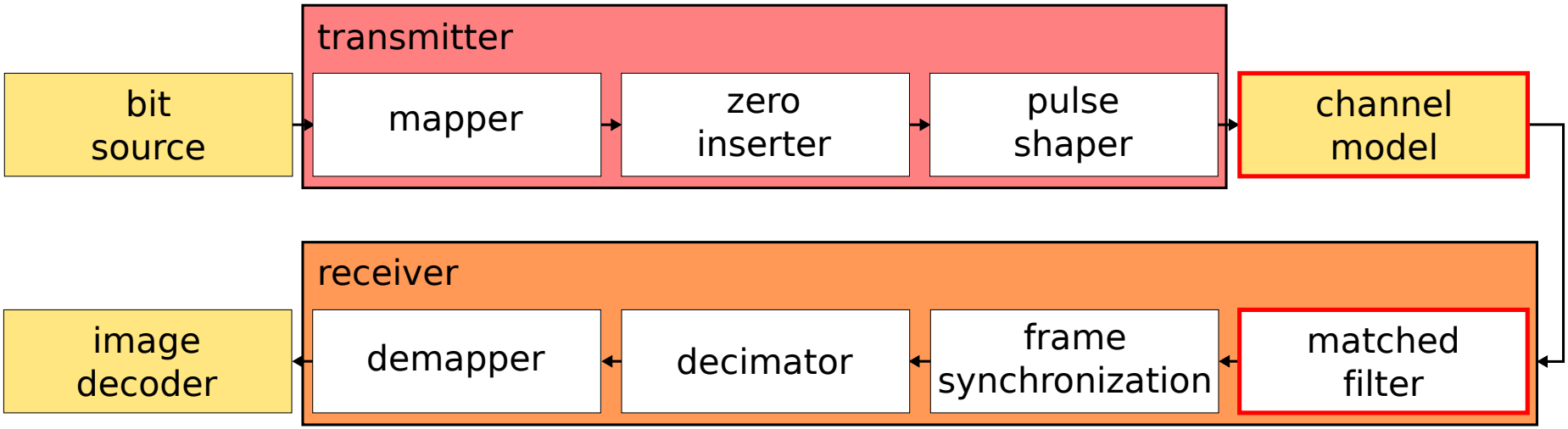


What you have implemented so far



- We can **not** transmit complex symbols over a physical channel!

First Task



- A transmitter-receiver is implemented in `ex3_3_1_demodpulse.m`.

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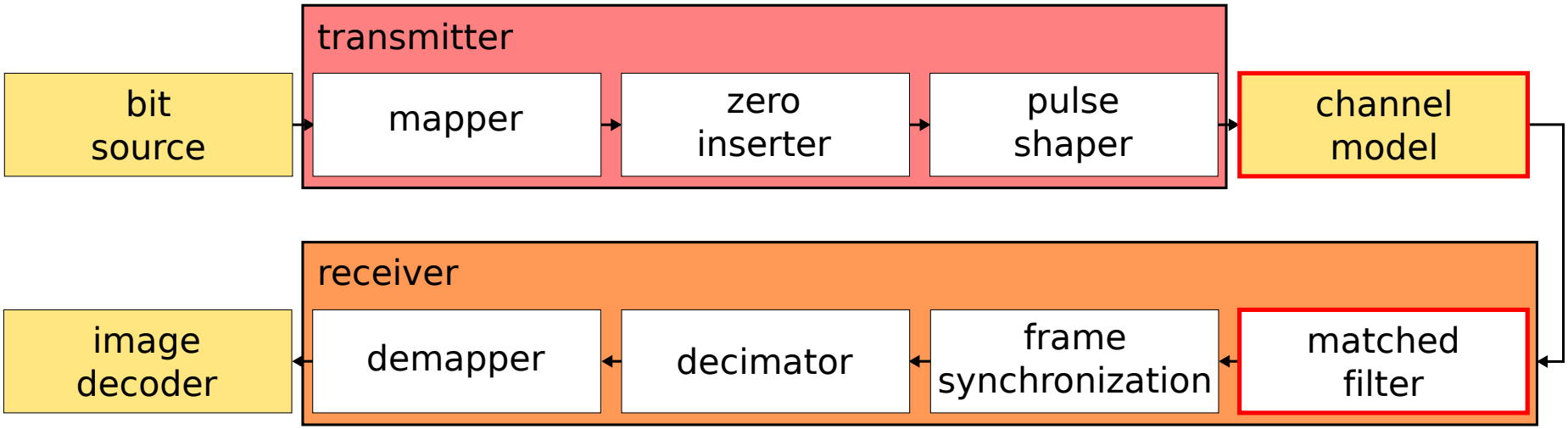

- A transmitter-receiver is implemented in `ex3_3_1_demodpulse.m`.
- You receive a symbol stream before the channel.

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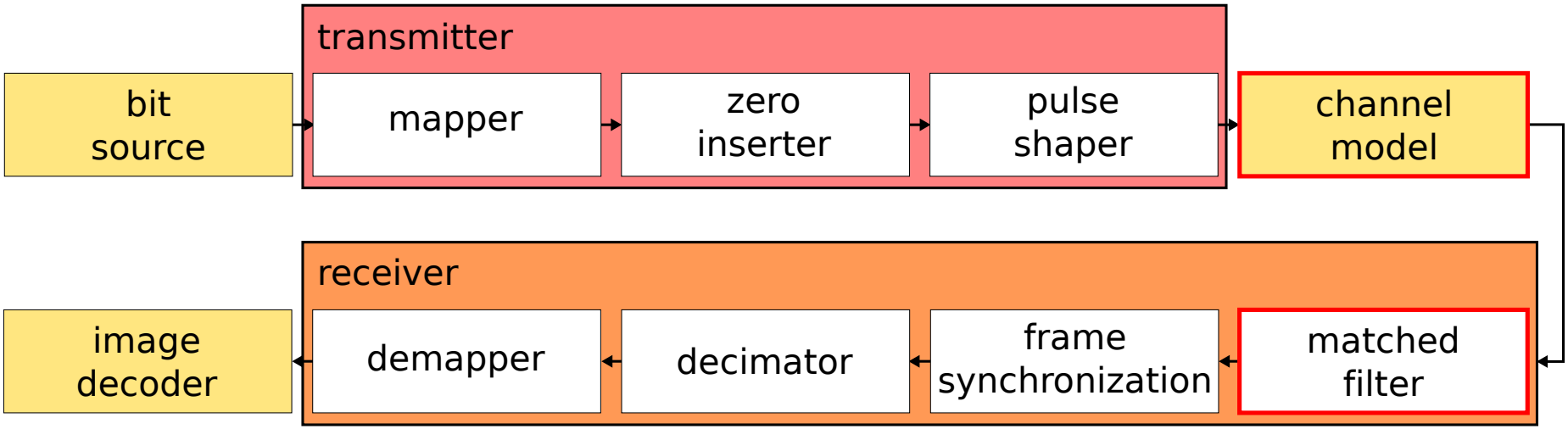

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- Apply a AWGN channel.

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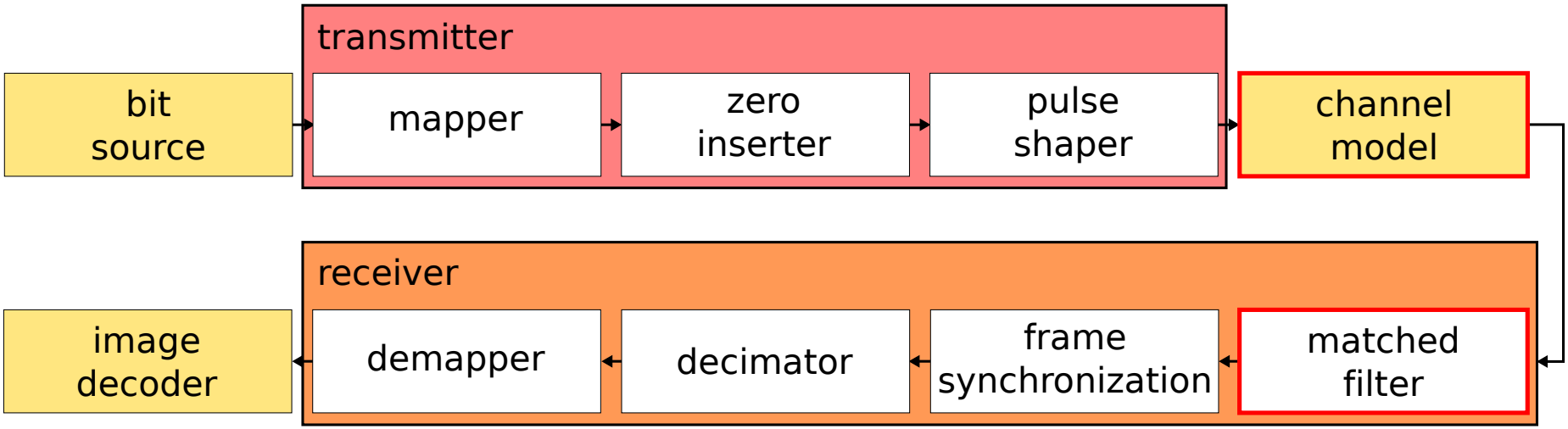

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- You receive a symbol stream before the channel.
- Apply a AWGN channel.
- Write a matched filter and insert it into the receiver.

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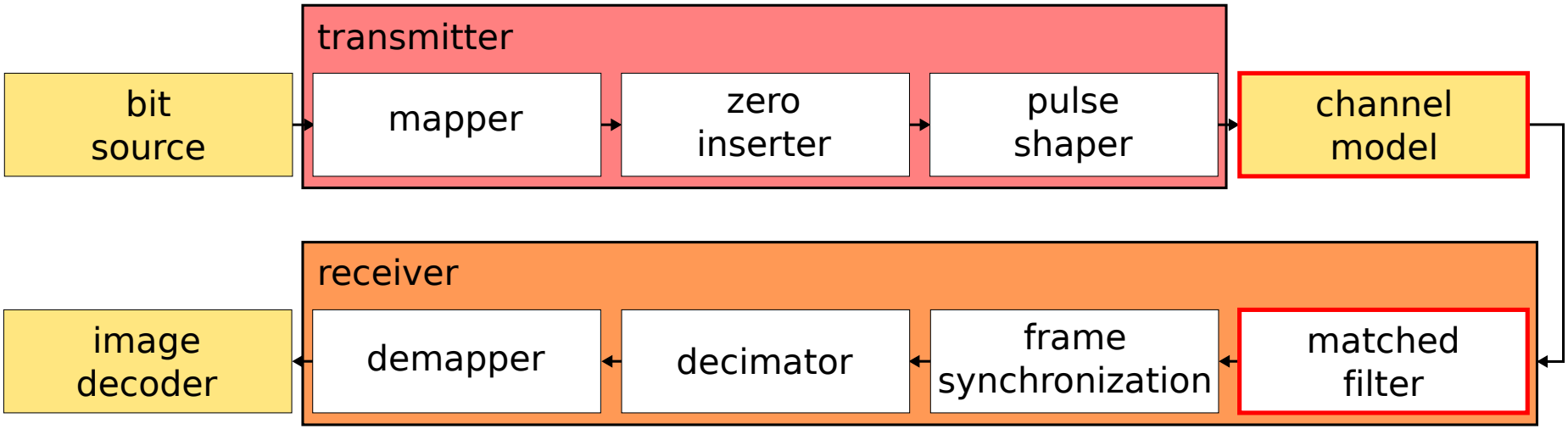
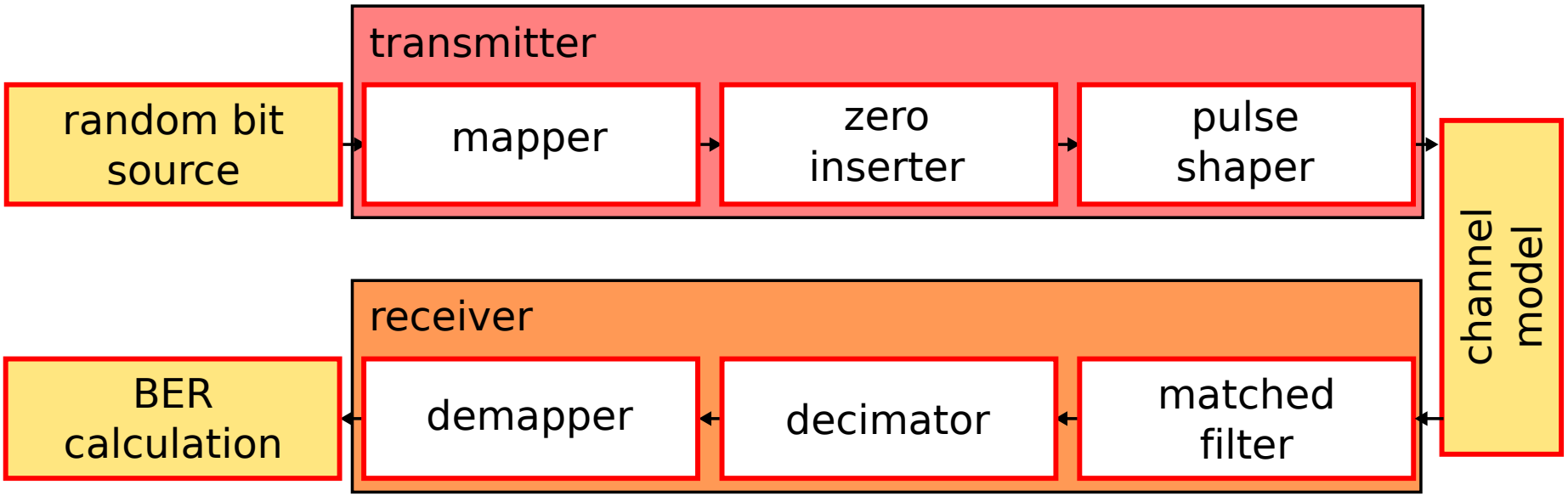


- A transmitter-receiver is implemented in `ex3_3_1_demodpulse.m`.
- You receive a symbol stream before the channel.
- Apply a AWGN channel.
- Write a matched filter and insert it into the receiver.
- Verify that you can decode the image correctly.

Second Task



- Generate a random bitstream and map it to symbols.
- Apply upsampling and transmitter pulse shaping.
- Apply AWGN.
- Apply receiver pulse shaping and decimation (downsampling).
- Demap the received symbols to bits and calculate the BER.