Description of Return-To-Base Model

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This document describes the implementations of the class *RTBModel*.

1 Model Description

The class *RTBModel* can be seen as an extended PWC model (implemented by class *PWCModel*) with a strong preference to a known base level. In other words, it infers the means of N given data points y_i of dimension D, where y_i is assumed to originate either from an unknown PWC model or a perfectly known model. Naturally, the perfectly known model would correspond to some constant base level (for example the all-zero level). This general way of modelling the data also motivated the name Return-To-Base (RTB) model.

Building on already described methods, the class *RTBModel* consists of an PWC model, a (perfectly known) base model, and a model selector. A factor graph visualizing the interplay between these building blocks is shown in Figure 1. Note the similarities of it structure with the factor graphs used to describe the model selector (shown in documentation of class *ModelSelector*) and the CLF model (class *CLFModel*).

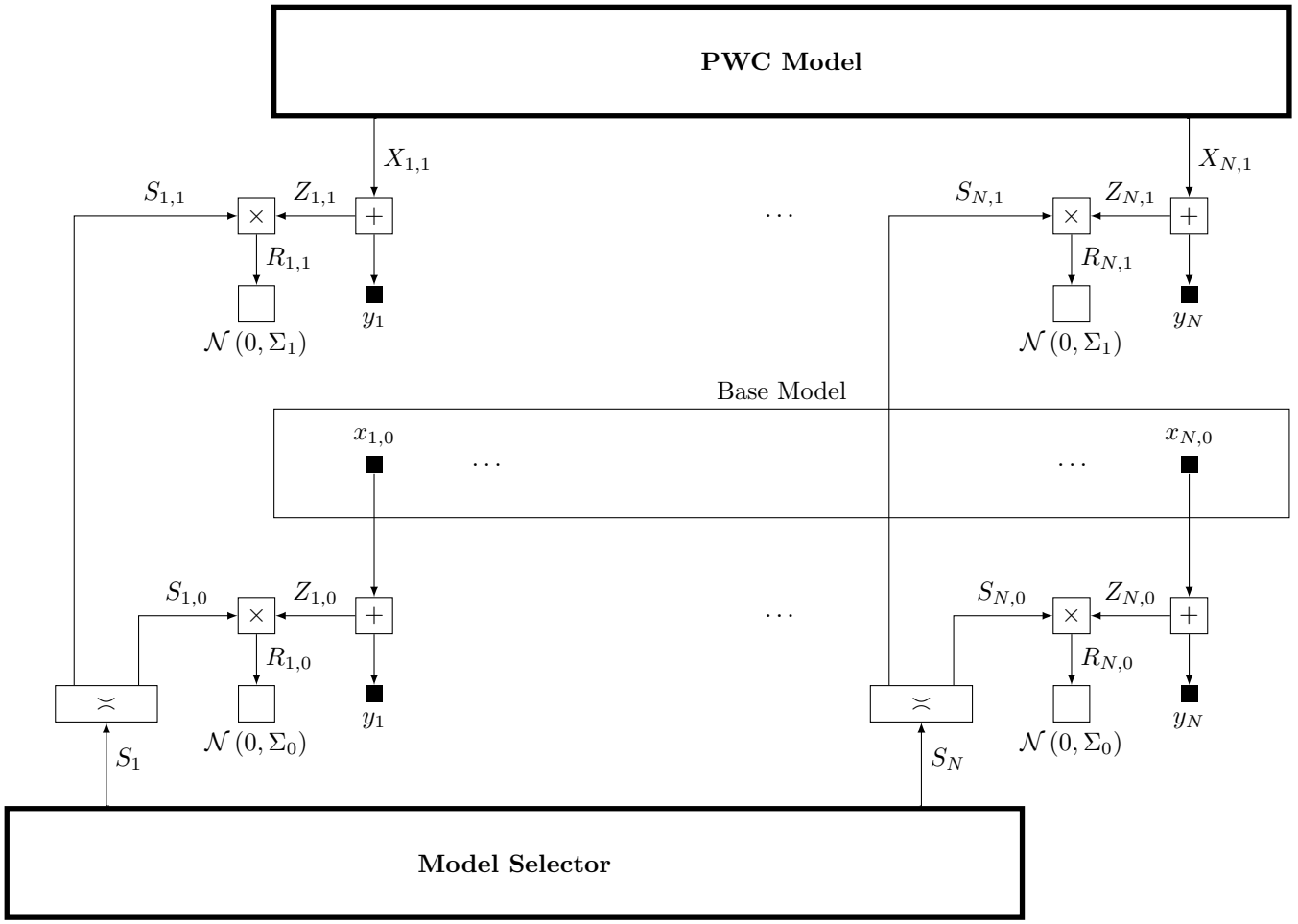

Figure 1: Factor graph of the RTB model.

2 Explanation of Implementations

References