resources with the message senders (e.g. hereby CM), etc. The processing

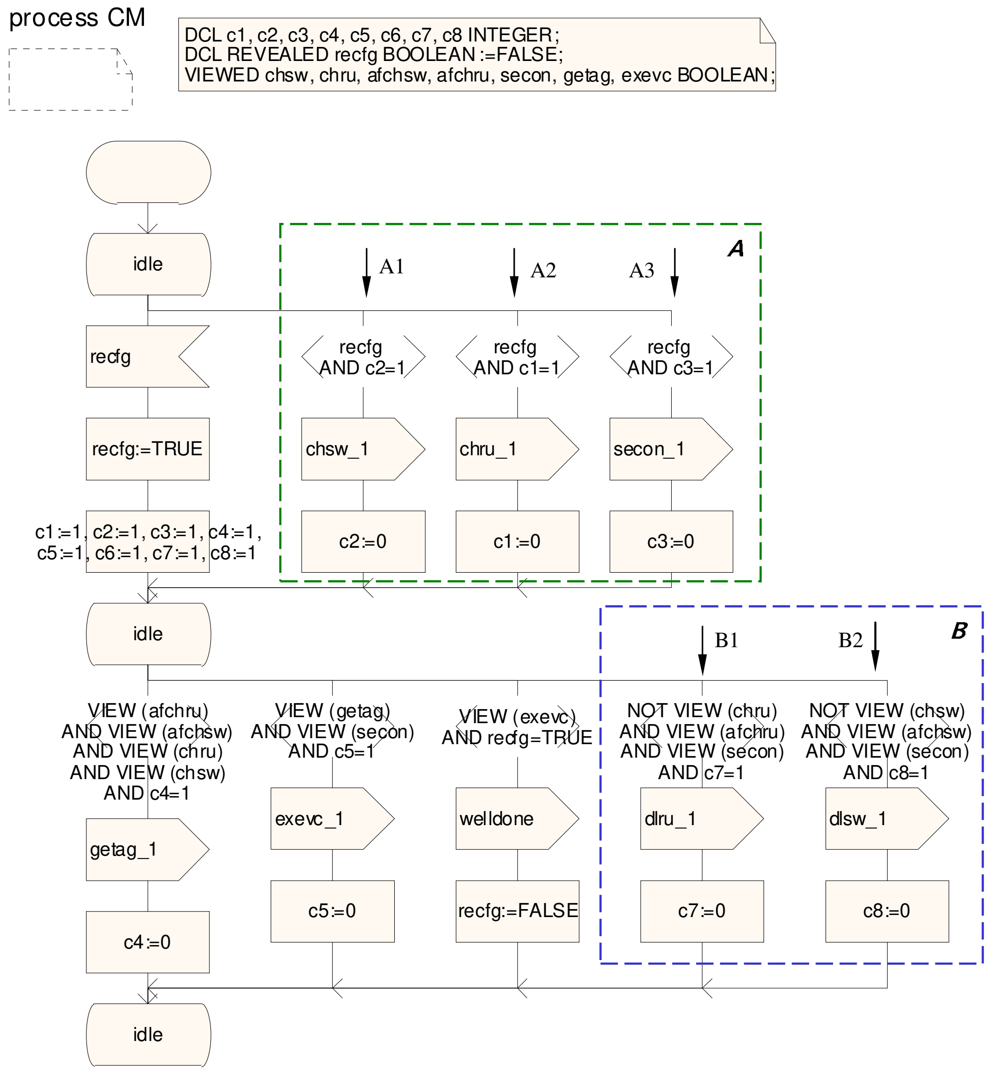

Figure 4: SDL diagram of the agent CM

Once the messages `chsw-1`, `chru-1` and `secon-1` are consumed by LSWR, CRH and SM respectively, the activities chsw, chru and secon start on the individual agents. In the simple running example, there are no further more agents involved, but complex cooperations with more communications among more agents can be realised in the same way. In order to demonstrate and validate the non-deterministic triggering and multicasting resulting from the relationships *r1* and *r2*, a timer is used in each of the three agents LSWR, CRH and SM, named as `Tchsw`, `Tchru` and `Tsecon` respectively. The timers are used to generate different delays within the three agents, representing the different timing conditions for the three leaf-node activities. The application of timer operator in LSWR is shown in the dashed rectangle *Delay* of F

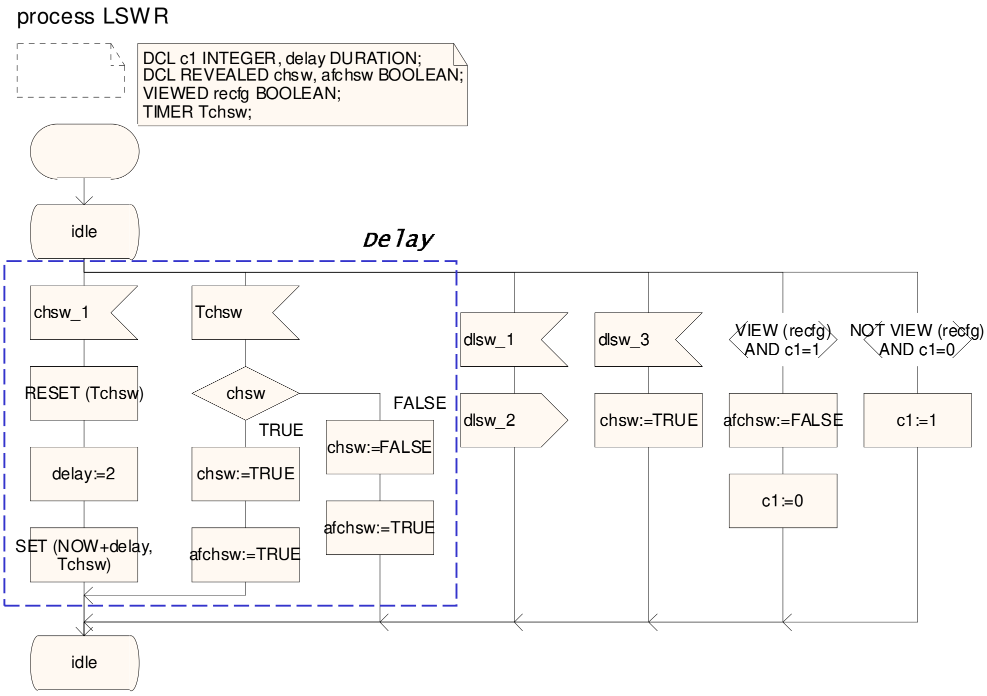

Figure 5: SDL diagram of the agent LSWR

In order to validate that the SDL specification meets the requirement of tolerating different processing conditions of each concurrent agent, an SDL simulator from Telelogic [22] is used to generate MSC traces in different timer delay settings. The simulation is to validate the specification against *all the possible episodes* within the 'Scenario With' and 'Scenario Without'. The paper only presents the simulation results against two episodes as examples,