ceives a message (a "record") m from Z (that it attempts to "add" to its chain) and potentially receives incoming network messages (delivered by A). It may then perform any computation, broadcast a message to all other players (which will be delivered by the adversary; see below) and update its local state  $chain_i$ . • A is responsible for delivering all messages sent by parties (honest or corrupted) to all other parties. A cannot modify the content of messages broadcast by honest players, but it may delay or reorder the delivery of a message as long as it eventually delivers all messages. (Later, we shall consider restrictions on the delivery time.) The identity of the sender is not known to

the recipient.<sup>10</sup>

• The execution proceeds in rounds that model time steps. In round r, each honest player i re-