

MODULE <i>Network</i>
EXTENDS <i>Naturals</i> , <i>FiniteSets</i> , <i>Message</i> , <i>NetworkInterface</i>
CONSTANTS <i>NetworkCapacity</i> # of messages, <i>NetworkSize</i> # of nodes (interfaces)
VARIABLES <i>network</i>
$NetworkSpace \triangleq [interfaces : NetworkInterfaceSpace, messages : MessageSpace]$ $Capacity(net) \triangleq Cardinality(net)$ $IsNetwork(net) \triangleq net \in NetworkSpace \wedge Capacity(net) \leq NetworkCapacity$
$Init \triangleq IsNetwork(network) \wedge Capacity(network) = 0$ $RegisterNetworkInterface(interface) \triangleq network.interfaces' \\ = network.interfaces \cup \{interface\}$