Active Message ID Allocation in TinyOS 2.1

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Note

This memo documents a part of TinyOS for the TinyOS Community, and requests discussion and suggestions for improvements. Distribution of this memo is unlimited. This memo is in full compliance with [TEP_1] and [TEP_4].

1. Introduction

TinyOS network protocols use allocated Active Message Type [TEP_116] to prevent AM ID conflict between different protocols. [TEP_4] describes how AM IDs are allocated for a TinyOS network protocol. In this TEP, we document the AM ID allocations in TinyOS 2.1.

2. Unreserved pool 128-255 (0x80 - 0xFF)

The unreserved pool is in the range 128-255 (0x80-0xFF). Applications distributed with TinyOS use AM IDs in this range. Protocols and applications in contrib as well as those developed by the community but not included in the distribution or contrib SHOULD use AM IDs in this range.

3. Reserved pool 0-127 (0x00 - 0x7F)

The reserved pool is in the range 0-127 (0x00-0x7F). The AM IDs in this range are used by protocols distributed with TinyOS.

Here is a list of allocations for TinyOS 2.1:

* 0x70 - 0x75 are reserved for collection protocols [TEP_119]_
  maintained by the Network Protocol Working Group.

  For CTP (''tos/lib/net/ctp'') [TEP_123]_ and LEEP [TEP_124]_
  0x70 - AM_CTP_ROUTING CTP (Routing beacon)
  0x71 - AM_CTP_DATA CTP (Data packets)
  0x72 - AM_CTP_DEBUG CTP (Debug messages)

  For MultiHopLQI (''tos/lib/net/lqi'')
  0x73 - AM_LQI_BEACON_MSG (Routing beacon)
  0x74 - AM_LQI_DATA_MSG MultiHopLQI (Data packets)
  0x75 - AM_LQI_DEBUG MultiHopLQI (Debug messages)

  For SRP(''tos/lib/net/srp'')
  0x76 - AM_SRP (Data packets)

 0x60 - 0x63 are reserved for dissemination protocols [TEP_118]_
  maintained by the Network Protocol Working Group.

  For Drip (''tos/lib/net/drip'')
  0x60 - AM_DISSEMINATION_MESSAGE
  0x61 - AM_DISSEMINATION_PROBE_MESSAGE

  For DIP (''tos/lib/net/dip'')
  0x62 - AM_DIP

  For DHV (''tos/lib/net/dhv'')
  0x63 - AM_DHV

 0x50 - 0x54 are reserved for Deluge (''tos/lib/net/Deluge'')
  maintained by the Network Protocol Working Group.

  0x50 - AM_DELUGEADVMSG (Advertisements)
  0x51 - AM_DELUGEREQMSG (Requests)
  0x52 - AM_DELUGEDATAMSG (Data)
  0x53 - DELUGE_AM_FLASH_VOL_MANAGER (Flash volume manager)
  0x54 - DELUGE_AM_DELUGE_MANAGER (Deluge manger)

 0x3D - TIMESYNC_AMTYPE for Packet Level Time Synchronization
  (''TimeSyncMessageC'') reserved by the Core Working Group.

 0x3E - AM_TIMESYNCMSG for FTSP (''tos/lib/ftsp'') reserved by the
  Core Working Group.

 0x3F - TinyOS NALP code [TEP_125]_ reserved by the Core Working
  Group.

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5. Citations

[TEP_4] TEP 4: Active Message ID Allocation for Network Protocols and Applications

[TEP_116] TEP 116: Packet Protocols

[TEP_118] TEP 118: Dissemination of Small Values

[TEP_119] TEP 119: Collection

[TEP_123] TEP 123: The Collection Tree Protocol (CTP)

[TEP_124] TEP 124: The Link Estimation Exchange Protocol (LEEP)

[TEP_125] TEP 125: TinyOS 802.15.4 Frames