

The Link Layer Discovery Protocol Specifications and Settings of TGP

(KX-TGP series)

No. 02-017

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Ver.1.0

Panasonic Corporation

Abstract about this document

This document describes about the specifications and settings of the Link Layer Discovery Protocol of TGP.

Revision history

Date	Version	Revision	Firmware version
Sep. 10, 2015	Ver. 1.0	Initial Release	All Versions

1. Overview

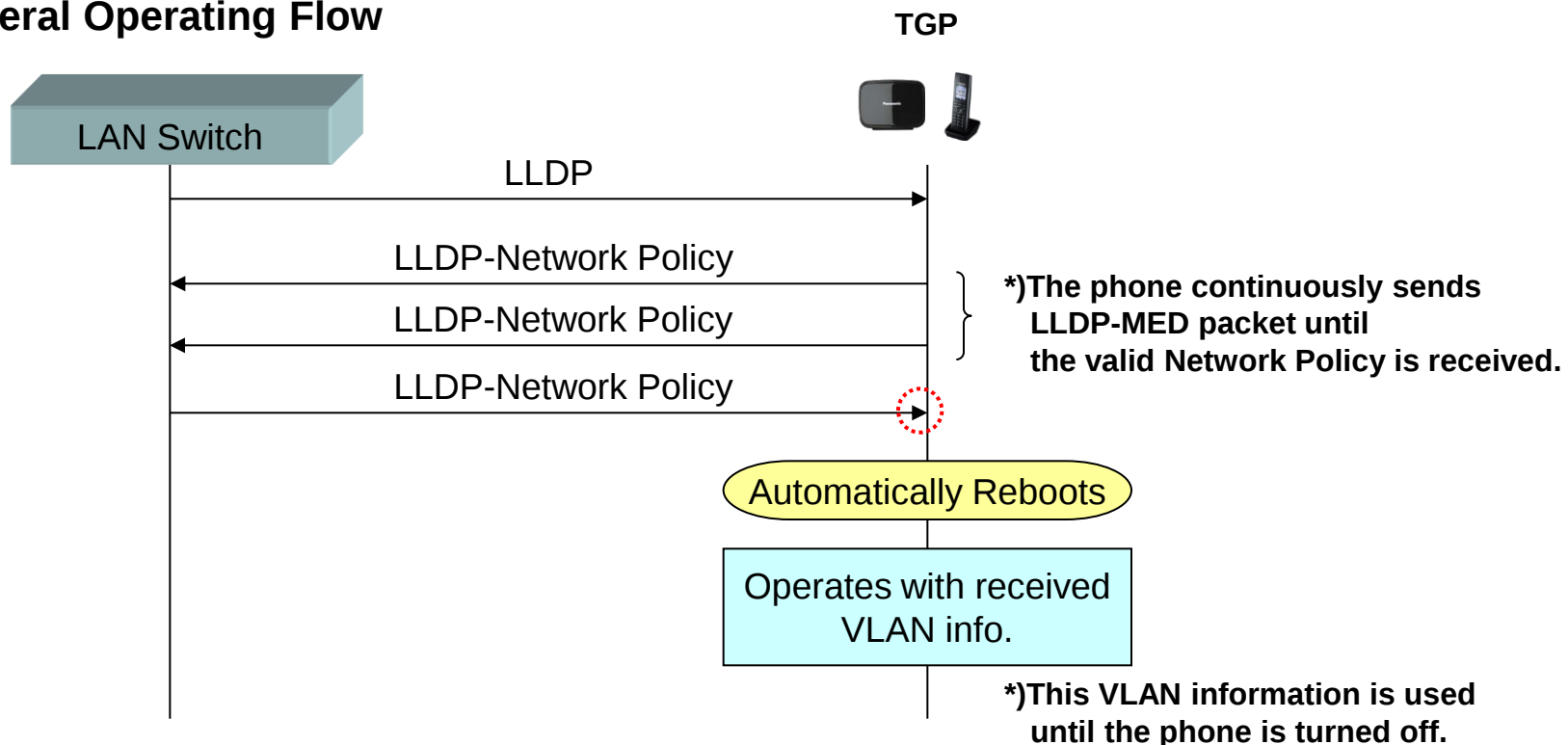
1-1. Overview

The TGP600 supports the Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED) which enables the VLAN settings of the phone automatically.

The LLDP protocol is defined by the following Standards.

- IEEE 802.1AB - 2005 (LLDP)
- ANSI/TIA-1057- 2006 (LLDP-MED)

1-2. General Operating Flow



2-1. Supported Type Length Values (TLV)

■ TLV Format



■ Basic

#	Name	Type	Length	OUI	Subtype	Information
1	Chassis ID	1	6	-	5	Network Address (Initial : 0.0.0.0)
2	Port ID	2	7	-	3	MAC Address
3	Time-to-live	3	2	-	-	120
4	Port description	4	8	-	-	LAN PORT
5	System name	5	9	-	-	Model e.g.) KX-TGP600
6	System description	6	19	-	-	Panasonic SIP Phone
7	System capabilities	7	4	-	-	0x0020, 0x0020

■ IEEE802.3(LAN)

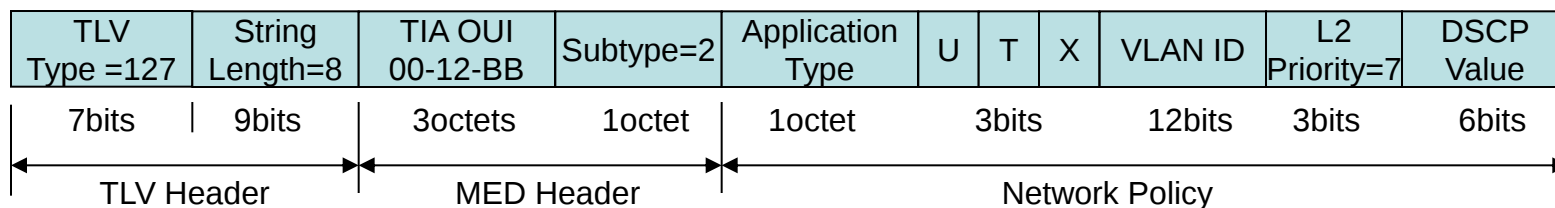
#	Name	Type	Length	OUI	Subtype	Information
8	IEEE 802.3 MAC/PHY config/status	127	6	0x00120f	1	

2-2. Supported Type Length Values (TLV)

■ LLDP-MED

#	Name	Type	Length	OUI	Subtype	Information
9	LLDP-MED Capabilities	127	7	0x0012bb	1	Endpoint Class III
10	Network Policy	127	8	0x0012bb	2	Voice Policy
11	Inventory - Hardware Revision	127	n	0x0012bb	5	Model e.g.) KX-TGP600
12	Inventory - Firmware Revision	127	10	0x0012bb	6	e.g.) 01.012
13	Inventory - Software Revision	127	10	0x0012bb	7	e.g.) 01.012
14	Inventory - Serial Number	127	16	0x0012bb	8	MAC address
15	Inventory - Manufacturer Name	127	29	0x0012bb	9	Panasonic System Networks
16	Inventory - Model Name	127	n	0x0012bb	10	Model e.g.) KX-TGP600
17	End of LLDP DU	0	0	-	-	-

■ Network Policy TLV Format



3-1-1. Settings of the LLDP(WEB)

■[Network] tab -> Ethernet Port Settings

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KX-TGP600

Status **Network** System VoIP Telephone Maintenance

Ethernet Port Settings

Web Port Close

Network

- Basic Network Settings
- Ethernet Port Settings**
- HTTP Client Settings
- STUN Settings
- Multicast Paging Settings
- LDAP Settings
- Xtended Service Settings
- UC Settings
- XML Application Settings

Link Speed/Duplex Mode

LAN Port Auto Negotiation

LLDP

Enable LLDP ☒ Yes ☐ No

Packet Interval 30 seconds [1-3600]

VLAN

Enable VLAN ☐ Yes ☒ No

VLAN ID 2 [0-4094]

Priority 7

The phone reboots automatically if you change the settings on this screen.

Save Cancel

3-1-2. Settings of the LLDP(WEB)

■ LLDP Settings and related Settings

Settings Parameter	Value	Description
Enable LLDP	Value Format: Boolean Value Range: Yes (Enable) No (Disable) Default Value: Yes	Selects whether to enable or disable sending and receiving LLDP frames. <u>Note:</u> • You should only set either of “LLDP” or “VLAN” to “Yes”. • When “Yes” is set to both of the above-mentioned parameters, only the settings for VLAN are used. Settings Priority: “VLAN” > “LLDP”
Packet Interval	Value Format: Integer Value Range: 0-3600 Default Value: 30	Specifies the interval, in seconds, between sending each LLDP frame.
Enable VLAN	Value Format: Boolean Value Range: Yes (Enable) No (Disable) Default Value: No	Specifies whether to use the VLAN feature to perform VoIP communication securely. It must be set to “No” when you would like to use the LLDP.

3-2-1. Settings of the LLDP(Provisioning)

■ Configuration parameters relating to the LLDP

Configuration Parameter	Value	Description
LLDP_ENABLE	Value Format: Boolean Value Range: Y(Enable) / N(Disable) Default Value: Y	Selects whether to enable or disable sending and receiving LLDP frames. <u>Note:</u> • You can only set either of “LLDP_ENABLE” or “VLAN_ENABLE” to “Y”. When “Y” is set to both of the above-mentioned parameters, only “VLAN_ENABLE” settings (higher priority) are used.
LLDP_INTERVAL	Value Format: Integer Value Range: 0-3600 Default Value: 30	Specifies the interval, in seconds, between sending each LLDP frame.
VLAN_ENABLE	Value Format: Boolean Value Range: Y(Enable) / N(Disable) Default Value: N	Specifies whether to use the VLAN feature to perform VoIP communication securely. It must be set to “N” when you would like to use the LLDP.

3-2-2. Settings of the LLDP(Provisioning)

■ Configuration Example to validate LLDP

```
# Panasonic SIP Phone Standard Format File # DO  
NOT CHANGE THIS LINE!
```

```
## LLDP-MED Settings
```

```
LLDP_ENABLE="Y"
```

```
LLDP_INTERVAL="30"
```

```
## Ethernet Port Settings
```

```
VLAN_ENABLE="N"
```

```
VLAN_ID_IP_PHONE="2"
```

```
VLAN_PRI_IP_PHONE="7"
```

```
[EOF]
```

3-3-1. Settings of the LLDP(Handset Menu:TGP600)

■[Menu]->[System Settings] ->[Network Settings]

Setting	Description	Value Range	Default
LLDP	Configure the LLDP settings.	-	-
On/Off	Enable or disable the “LLDP” settings.	On (Enable) Off (Disable)	On
VLAN	Configure the VLAN settings.	-	-
Enable VLAN	Select whether to enable the VLAN functionality.	Yes (Enable) No (Disable)	No

Note

- When both LLDP and VLAN settings are enabled, VLAN settings are prioritized.