Comments in Docket 07-52 and 08-7. Filed in both dockets per procedures outlined by the Commission in this and other multiple docket number proceedings.

If for any reason these are considered late-filed as original comments, I move that these comments be accepted as original comments under the applicable rules involving the filing of comments. They contain information on the matter being discussed that may not otherwise reach the Commission or its staff any other way.

1. DOCSIS

DOCSIS is a bandwidth provisioning system that is fast becoming a standard in the cable and broadband Internet ISP business generally. It began as a Sourceforge project. The following description comes from the original project homepage, and references DOCSIS 1.0. It is now up to DOCSIS 2.x and later this year Comcast has indicated they will more fully implement DOCSIS 3.0.

DOCSIS 3.0 is already deployed in some areas.

This is the text on the project homepage:

Welcome to the docsis project web page !

What does it do ?

docsis is a small program that can be used to generate binary configuration files for DOCSIS-compliant cable modems. DOCSIS stands for Data over Cable Service Interface Specification and is a standard developed by Cablelabs.

You can download the specifications from Cablelabs' website. The relevant specification is the Radio Frequency Interface Specification, which contains the bulk of the standard.

This program is useful for people/operators using DOCSIS Cable Modems that want to implement their own provisioning system, or for people testing/working with DOCSIS technology in general. Otherwise, there's nothing you can do with it. It is not destined to end-users.

How advanced it is ?

docsis supports most DOCSIS 1.0 configuration settings. The format of the configuration file was designed to be human-readable. Here are some examples.

New configuration settings are easy to add based on the infrastructure that is already in place. Let us know if you need new configuration settings, or better add them yourself and send us a patch .

Currently only the main DOCSIS 1.1 configuration settings are supported (Packet Classifiers, Service Flows etc). If you need more you can go ahead and implement them yourself !

Download

Click here to get the latest version.

Authors

This program is currently maintained by Evvolve SRL. (evvolve at users.sourceforge.net). E-mail us if you have any questions.

The initial implementation was done by Cornel Ciocirlan (ctrl at users.sourceforge.net).

This project is hosted by SourceForge, http://www.sourceforge.net.

CableLabs website: http://www.cablelabs.com/ Please refer to that for additional documents, I therefore incorporate materials from that site by reference to the site in this comment document.

Actual coding sample, retrieved from this site:

```
/*
 *  This is an exmaple configuration file for the DOCSIS configuration file
 * encoder. It is not exhaustive. Currently it supports only Integer,
 * IP address and String for SNMP settings. Adding more types is quite
 * trivial.
 */

Main { /* this is a comment */
DownstreamFrequency  123000000;
UpstreamChannelId    1;
/* this is a comment */
NetworkAccess  1;
ClassOfService {
```

```
 ClassID  1;
 MaxRateDown 512000;
 MaxRateUp 64000;
 PriorityUp 3 ;
 GuaranteedUp 32000;
 MaxBurstUp 54314;
 PrivacyEnable 1;
}

BaselinePrivacy { /* ONLY if PrivacyEnable == 1 ! */
        AuthTimeout             10;
        ReAuthTimeout           10;
        AuthGraceTime           600;
        OperTimeout         10;
        ReKeyTimeout            10;
        TEKGraceTime            600;
        AuthRejectTimeout       9;
}

SnmpMibObject sysName.0 String "gamadelta"; /* Set sysName */
SnmpMibObject sysContact.0 String "evvolve@users.sourceforge.net" ;/* sysContact  */

SnmpMibObject .1.3.6.1.2.1.69.1.6.3.0 Integer 1;    /* Default discard */

SnmpMibObject docsDevFilterIpStatus.1 Integer 6;/* IpStatus/1 destroy */
SnmpMibObject docsDevFilterIpControl.1 Integer 2;/* IpControl/1 accept */
SnmpMibObject docsDevFilterIpIfIndex.1 Integer 0;/* IpIfIndex/1 both */
SnmpMibObject docsDevFilterIpDirection.1 Integer 3;/* IpDirection/1 both */
SnmpMibObject docsDevFilterIpBroadcast.1 Integer 2;/* IpBroadcast/1 false */
SnmpMibObject docsDevFilterIpSaddr.1 IPAddress 0.0.0.0; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.1 IPAddress 0.0.0.0;/*Smask*/
SnmpMibObject docsDevFilterIpDaddr.1 IPAddress 0.0.0.0; /*DAddr*/
SnmpMibObject docsDevFilterIpDmask.1 IPAddress 0.0.0.0; /*DMask*/
SnmpMibObject docsDevFilterIpProtocol.1 Integer 1; /* Proto ICMP */
SnmpMibObject docsDevFilterIpStatus.1 Integer 4;/* IpStatus/1 cAndGo */

/* Row 2 */

SnmpMibObject docsDevFilterIpStatus.2 Integer 6;/* IpStatus/2 destroy */
```

SnmpMibObject docsDevFilterIpControl.2 Integer 2;/* IpControl/2 accept */
SnmpMibObject docsDevFilterIpIfIndex.2 Integer 0;/* IpIfIndex/2 both */
SnmpMibObject docsDevFilterIpDirection.2 Integer 3;/* IpDirection/2 both */
SnmpMibObject docsDevFilterIpBroadcast.2 Integer 2;/* IpBroadcast/2 false */
SnmpMibObject docsDevFilterIpSaddr.2 IPAddress 0.0.0.0; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.2 IPAddress 0.0.0.0;/*Smask*/
SnmpMibObject docsDevFilterIpDaddr.2 IPAddress 10.1.1.1; /*DAddr*/
SnmpMibObject docsDevFilterIpDmask.2 IPAddress 255.255.255.255; /*DMask*/
SnmpMibObject docsDevFilterIpProtocol.2 Integer 6; /* Proto TCP */
SnmpMibObject docsDevFilterIpStatus.2 Integer 4;/* IpStatus/2 cAndGo */

/* Row 3 */

SnmpMibObject docsDevFilterIpStatus.3 Integer 6;/* IpStatus/3 destroy */
SnmpMibObject docsDevFilterIpControl.3 Integer 2;/* IpControl/3 accept */
SnmpMibObject docsDevFilterIpIfIndex.3 Integer 0;/* IpIfIndex/3 both */
SnmpMibObject docsDevFilterIpDirection.3 Integer 3;/* IpDirection/3 both */
SnmpMibObject docsDevFilterIpBroadcast.3 Integer 2;/* IpBroadcast/3 false */
SnmpMibObject docsDevFilterIpSaddr.3 IPAddress 10.1.1.1; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.3 IPAddress 255.255.255.255;/*Smask*/
SnmpMibObject docsDevFilterIpDaddr.3 IPAddress 0.0.0.0; /*DAddr*/
SnmpMibObject docsDevFilterIpDmask.3 IPAddress 0.0.0.0; /*DMask*/
SnmpMibObject docsDevFilterIpProtocol.3 Integer 6; /* Proto TCP */
SnmpMibObject docsDevFilterIpStatus.3 Integer 4;/* IpStatus/3 cAndGo */

/* Row 4 */

SnmpMibObject docsDevFilterIpStatus.4 Integer 6;/* IpStatus/4 destroy */
SnmpMibObject docsDevFilterIpControl.4 Integer 2;/* IpControl/4 accept */
SnmpMibObject docsDevFilterIpIfIndex.4 Integer 0;/* IpIfIndex/4 both */
SnmpMibObject docsDevFilterIpDirection.4 Integer 3;/* IpDirection/4 both */
SnmpMibObject docsDevFilterIpBroadcast.4 Integer 1;/* IpBroadcast/4 true */
SnmpMibObject docsDevFilterIpSaddr.4 IPAddress 0.0.0.0; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.4 IPAddress 0.0.0.0; /* Smask*/
SnmpMibObject docsDevFilterIpDaddr.4 IPAddress 0.0.0.0; /* DAddr*/
SnmpMibObject docsDevFilterIpDmask.4 IPAddress 0.0.0.0; /* DMask*/
SnmpMibObject docsDevFilterIpProtocol.4 Integer 17; /* Proto UDP */
SnmpMibObject docsDevFilterIpStatus.4 Integer 4;/* IpStatus/4 cAndGo */

/* Row 5 */

SnmpMibObject docsDevFilterIpStatus.5 Integer 6;/* IpStatus/5 destroy */
SnmpMibObject docsDevFilterIpControl.5 Integer 2;/* IpControl/5 accept */
SnmpMibObject docsDevFilterIpIfIndex.5 Integer 0;/* IpIfIndex/5 both */
SnmpMibObject docsDevFilterIpDirection.5 Integer 3;/* IpDirection/5 both */
SnmpMibObject docsDevFilterIpBroadcast.5 Integer 2;/* IpBroadcast/5 true */
SnmpMibObject docsDevFilterIpSaddr.5 IPAddress 0.0.0.0; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.5 IPAddress 0.0.0.0; /* Smask*/
SnmpMibObject docsDevFilterIpDaddr.5 IPAddress 0.0.0.0; /* DAddr*/
SnmpMibObject docsDevFilterIpDmask.5 IPAddress 0.0.0.0; /* DMask*/
SnmpMibObject docsDevFilterIpProtocol.5 Integer 17; /* Proto UDP */
SnmpMibObject docsDevFilterIpStatus.5 Integer 4;/* IpStatus/5 cAndGo */

/* Row 6 */

SnmpMibObject docsDevFilterIpStatus.6 Integer 6;/* IpStatus/6 destroy */
SnmpMibObject docsDevFilterIpControl.6 Integer 2;/* IpControl/6 accept */
SnmpMibObject docsDevFilterIpIfIndex.6 Integer 0;/* IpIfIndex/6 both */
SnmpMibObject docsDevFilterIpDirection.6 Integer 3;/* IpDirection/6 both */
SnmpMibObject docsDevFilterIpBroadcast.6 Integer 2;/* IpBroadcast/6 true */
SnmpMibObject docsDevFilterIpSaddr.6 IPAddress 0.0.0.0; /* SAddr */
SnmpMibObject docsDevFilterIpSmask.6 IPAddress 0.0.0.0; /* Smask*/
SnmpMibObject docsDevFilterIpDaddr.6 IPAddress 0.0.0.0; /* DAddr*/
SnmpMibObject docsDevFilterIpDmask.6 IPAddress 0.0.0.0; /* DMask*/
SnmpMibObject docsDevFilterIpProtocol.6 Integer 6; /* Proto TCP */
SnmpMibObject docsDevFilterIpSourcePortLow.6 Integer 53; /* SrcPortLow */
SnmpMibObject docsDevFilterIpSourcePortHigh.6 Integer 53; /* SrcPortHigh */
SnmpMibObject docsDevFilterIpDestPortLow.6 Integer 53; /* DstPortLow */
SnmpMibObject docsDevFilterIpDestPortHigh.6 Integer 53; /* DstPortHigh */
SnmpMibObject docsDevFilterIpStatus.6 Integer 4;/* IpStatus/6 cAndGo */

MaxCPE 3;
}

This paragraph is very nearly if not the key to the entire problem of Comcast blocking BitTorrent, and others throttling Internet user's access to content as I have discussed previously in my other comments.

```
Main { /* this is a comment */
DownstreamFrequency  123000000;
UpstreamChannelId    1;
/* this is a comment */
NetworkAccess  1;
ClassOfService {
 ClassID  1;
 MaxRateDown 512000;
 MaxRateUp 64000;
 PriorityUp 3 ;
 GuaranteedUp 32000;
 MaxBurstUp 54314;
 PrivacyEnable 1;
```

Read especially MaxRateDown, MaxRateUp, GuaranteedUp, and MaxBurstUp. Here is what I see. The numbers entered in the above example appear to be a sample showing what is put on what line, actual numbers entered by those implementing DOCSIS vary.

MaxRateDown: The maximum speed at which the system is set to download data from the Internet via the user's modem.
MaxRateUp: The maximum speed at which the end user is able to up load any file back to/through the server.
GuaranteedUp: This is the 'floor' rate at which the system automatically sets itself to. The number is less than the above figures to allow for issues relating to actual congestion of the Internet.
MaxBurstUp: Similar to what I believe Comcast calls 'PowerBoost' going down, although I do not see anything to indicate this is one and the same but it points to a similar process not mentioned in this process sample page. Indicates the top speed at which a file may be transmitted up. This might well have to do with the upload problems Bittorrent and other file senders may have had with Comcast. The Commission will have to enquire further of Comcast and other ISPs to get the full details of how they are using DOCSIS in this manner. I'm not a tech, but know this doesn't seem to look quite right in the eyes of those who know.

Here is another website where the Commission and other interested parties can get information about DOCSIS 3.0 implementation. However, the information you may get from the site may be skewed slightly based on the profit motives of the company providing the downloads. That is not a negative, it

is a known expectation when dealing with corporate entities desiring to ultimately sell a product or service, but I believe the documents that can be obtained here may provide some additional details and should be retrieved by the Commission and made part of the record where they apply.

http://ngn.symmetricom.com/lp/DOCSIS/
Retrieved 17 April 2008.