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Re:	The document is contributed in support for a comment submitted within 802.16REVd/D3 Sponsor Ballot
Abstract	**The document suggests change in definition of Service Classes in 802.16 MAC**
Purpose	The document must be considered in the process of comment resolutions within 802.16REVd/D3 Sponsor Ballot
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Change in definition of Service Classes

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1. Background

Note in 802.16REVd/D3, section 6.4.13.1 ["requirements to QoS"]
"e) Grouping of service flow properties into named Service Classes, so upper-layer entities and external applications (at both the SS and BS) may request service flows with desired QoS parameters in a globally consistent way."

Existing definition of Service Classes actually does not target this goal. Opposite, Service Classes are defined as a tool to make actual QoS parameters different in different cells though global definitions are the same. On the other hand, definition of Service Classes in 802.16e-D1 looks more close to the goal and more useful.

So the point is to change definition of Service Class to serve the above goal and to fit needs of 802.16e.

2. Specific Changes in 802.16REVd/D3

[Change in 6.4.2.3.11]

If the transaction is successful, the DSA-RSP may contain the following:

~~Service Flow Parameters (see 11.13)~~

~~The complete specification of the service flow shall be included in the DSA-RSP only if it includes a newly assigned CID or an expanded Service Class Name.~~

CS Parameter Encodings (see 11.13.22)

Specification of the service flow's CS specific parameters.

[Change in 6.4.13.4]

6.4.13.4 Service classes

The Service Class serves the following purposes:

a) It allows operators to create certain templates for Service Flows to follow. Such a template may include any Service Flow parameters including QoS parameters. Service Class is identified by Service Class name. Definition of specific Service Class typically is provided by means of network management to both BS and SS; thus procedures of creation/change/deletion of Service Class are out of scope of the standard. ~~, who so wish, to move the burden of configuring service flows from the provisioning server to the BS. Operators provision the SSs with the Service Class Name; the implementation of the name is configured at the BS. This allows operators to modify the implementation of a given service to local circumstances without changing SS provisioning. For~~

~~example, some scheduling parameters may need to be tweaked differently for two different BSs to provide the same service. As another example, service profiles could be changed by time of day.~~

~~b)~~ Pre-configured Service Class ~~It~~ allows higher layer protocols to create a service flow by its Service Class Name. For example, telephony signaling may direct BS or ~~the~~ SS to instantiate any available Provisioned service flow of class “G711.”

NOTE—Service classes are merely identifiers for a specific set of QoS parameter set values. Hence, the use of service classes is optional. A service identified by a service class is treated no differently, once established, than a service that has the same QoS parameter set explicitly specified.

Any service flow may have its QoS Parameter Set specified in any of ~~three~~ two ways:

— By explicitly including all traffic parameters.

— By indirectly referring to a set of traffic parameters by specifying a Service Class Name.

~~— By specifying a Service Class Name along with modifying parameters.~~

Initially, set of parameters specified in the Service Class definition is considered “Provisioned”. The Service Class Name is “expanded” to its defined set of parameters at the time the BS successfully

admits the service flow. In this case Service Class Name shall be used to specify the Admitted QoS Parameter Set. The Service Class name ~~expansion~~ can be contained in the following BS-originated messages:

DSA-REQ, DSC-REQ, DSA-RSP, and DSC-RSP. ~~In all of these cases, the BS shall include a service flow encoding that includes the Service Class Name and the QoS Parameter Set of the Service Class. If an SS-initiated request contained any supplemental or overriding service flow parameters, a successful response shall also include these parameters.~~

~~When a Service Class name is given in an admission or activation request, it is possible that the returned QoS Parameter Set may change from activation to activation. This can happen because of administrative changes to the Service Class’s QoS Parameter Set at the BS. If the definition of a Service Class Name is changed at the BS (e.g., its associated QoS Parameter Set is modified), it has no effect on the QoS Parameters of existing service flows associated with that Service Class~~. A BS may initiate DSC transactions to existing service flows which reference the Service Class Name to affect the changed Service Class definition.

~~When an SS uses the Service Class Name to specify the Admitted QoS Parameter Set, the expanded set of TLV encodings of the service flow shall be returned to the SS in the response message (DSA-RSP or DSC-RSP). Use of the Service Class Name later in the activation request may fail if the definition of the Service Class Name has changed and the new required resources are not available. Thus, the SS should explicitly request the expanded set of TLVs from the response message in its later activation request.~~