Technical Specification Group RAN *TSGRP#7(00)0177*
Meeting #7, Madrid, Spain, 13-15 March 2000

Source: **ETSI MCC**[1]

Title: **Proposed definitions of "Feature", "Building Block" and "Work Task"**

Agenda Item:

Why manage a project?

Answer: So that you know where you are going, and so that you know when you have arrived.

And, incidentally, so that your boss (who is putting up the money for you to do your work) knows too.

How to manage a project?

Answer: Define what goals you are trying to achieve. Then analyse the goal and work out what you need to do to get from where you are now to where you want to be.

This analysis will naturally lead to your defining the new *features* which you wish to add to the existing system.

> **Feature**:
> New, or substantially enhanced functionality which represents added value to the existing system.

A feature should be more or less self-contained - that is, each feature can be viewed as an optional extra, which can be added or not as a function of market demand. Network operators and equipment manufacturers can decide using *commercial* considerations whether or not to implement a feature. The description of a feature need not be technically precise, but should represent a concept which can be understood at a "service" level. It should answer the question: what do I get for my money? **A feature should normally embody an improved service to the customer and / or increased revenue generation potential to the supplier**.

This being the case, most features would be the responsibility of TSG-SA WG1. The ensemble of the features of a particular release of the system represents the difference between that release and the previous release.

A feature can be considered as a high-level goal for project management purposes. But most features will be quite complex, and will need to be broken down into simpler elements or building blocks for the purpose of specifying precise functionality.

> **Building block**:
> A sub-division of a feature, representing a coherent set of technical functionality which would generally be expected to reside in a single system element.

A building block will be defined in technical terms, and its description will require an understanding of the architecture of the overall system. A building block will generally be restricted to a single physical or logical entity or a single protocol such as "terminal" or "call control". **Building blocks may be "re-usable" - that is, a single building block may be common to two or more features.** This implies a generic or object-oriented approach. A building block will normally be the responsibility of a single TSG.

In the case of very simple features, a single building block may suffice, in which case the feature and its building block are synonymous.

1 Contacts: john.meredith@etsi.fr **+33 (0)6 10 42 03 76**
alain.sultan@etsi.fr **+33(0)4 92 94 42 71**

To implement a building block it will generally be necessary further to subdivide the functionality into smaller tasks, each representing a closely specified and easily comprehended activity. Such work tasks may not only be divided by technical content, but potentially by phase. So, for example, it is necessary fully to define service aspects (one or more work tasks) before considering functional information flows (one or more work tasks) which in turn will be followed by detailed protocol specification (one or more work tasks).

Work task:
A sub-division of a building block, representing a self-contained, well-scoped and well-scheduled item of work.

It is at this lowest hierarchical level of breakdown that estimations of work content and thus time scales can be calculated. From the estimated schedules of each work task which comprises a building block, and from their inter-dependences, can be derived the overall schedule for the "parent" building block. From the schedules of all component building blocks, the time-to-completion of the parent feature can be estimated. **A work task will almost certainly be the responsibility of a single Working Group.**

The output of a work task will be:

- One or more new Technical Specifications (or Reports); and / or
- Change Requests to existing TSs / TRs.

Features, building blocks and work tasks are the three specific types of "work item".

In the case of very simple building blocks, a single work task may suffice, in which case the building block and its work task are synonymous.

Work item:
A generic term used to encompass feature, building block and work task.

All work items, whatever their class (feature, building block or work task) require

- A precise definition of content ("scope");
- An estimated schedule, with milestones to track progress if possible; (in the case of building blocks and features, the schedule can be derived from those of its component work tasks);
- A named person to act as rapporteur (in effect, the manager of the work item);
- At least four Member Organizations supporting the work item and willing to offer active participation in its realization.

A fuller description of the term "work item" can be found in the 3GPP Working Procedures (http://www.3gpp.org/About_3GPP/3gpp_wp.zip), articles 38 and 39:

Article 38: Work Items

A 3GPP Work Item is a specification task defined in terms of the following principle parameters:

- title;
- intended output (ie Technical Specifications or Technical Reports);
- impact on other Technical Specifications and Technical Reports;
- technical scope, including the field of application of the intended output;
- impact on other 3GPP Work Items;
- the schedule of tasks to be performed;
- the identities of the supporting Individual Members;
- the identity of the Work Item Rapporteurs.

Article 39: Work Item creation

Each proposed new Work Item shall be supported by at least four Individual Members, and their names shall be recorded in the Work Item definition prepared for the TSG approval. One or more persons shall be named as Rapporteur for the proposed Work Item, and the Rapporteur shall act as the prime contact point on technical matters and for information on progress throughout the drafting phases.The supporting Individual Members are expected to contribute to and progress the new work item throughout the drafting phases.

In addition to the above, TSGs shall approve new Work Items, giving all essential parameters. The proposal shall be entered into the 3GPP work programme, clearly marked as a new entry, for which a unique reference identity shall be allocated.

It may not be clear at the outset whether a work item should be classified as a feature, a building block, or a work task. However, analysis on the above lines should sooner or later refine the definition into one of the three.

Work items are specified using a template (included as a separate file zipped with the present contribution).

Recommendation

It is recommended that the 3GPP TSGs and their Working Groups adopt the above terminology in order to have a common approach and mutual understanding during the development of Release 2000 and subsequent releases of the system specifications.