The ITU Radiocommunication Assembly,

considering

a) that there is a need for a common method or procedure for the unambiguous specification and description of the behaviour of telecommunication systems;
b) that a specification of a system is the description of its required behaviour;
c) that a description of a system is the description of its actual behaviour;
d) that a universal method for specification and description should bring economic benefits;
e) that the ITU-T has adopted such a method called the Specification and Description Language (SDL) as described in ITU-T Recommendation Z.100,

unanimously recommends

1. the general use within the ITU of the ITU-T SDL for unambiguous specification and description of telecommunication systems (see Annex 1);

2. that the possibilities for application of SDL in areas of common interest for the purposes of standardization be brought to the attention of other international bodies (e.g. the International Electrotechnical Commission (IEC) and International Organization for Standardization (ISO) for their consideration.

ANNEX 1

Introduction to SDL

The purpose of recommending SDL is to provide a language for unambiguous specification and description of the behaviour of telecommunications systems. The specifications and descriptions using SDL are intended to be formal in the sense that it is possible to analyse and interpret them unambiguously.

The terms specification and description are used with the following meaning:

– a specification of a system is the description of its required behaviour, and
– a description of a system is the description of its actual behaviour.

SDL also provides structuring concepts which allow a system to be partitioned so that it can be defined, developed and understood one part at a time.

These concepts are of value both initially in specifying a system, when different aspects can be independently dealt with, and later in describing a system, when the description structures should match the system structure.

* This Recommendation was updated in 1997 for editorial reasons only.
SDL gives a choice of the use of two different forms when representing SDL descriptions; a graphic representation (SDL/GR) and a textual phrase representation (SDL/PR). As they are both specific representations of the same SDL semantics, they are equivalent from a semantic point of view.

**Objectives**

The general objectives when defining SDL have been to provide a language that:

– is easy to learn, use and interpret in relation to the needs of an operating organization;
– provides unambiguous specifications and descriptions for ordering and tendering;
– may be extended to cover new developments;
– is able to support several methodologies of system specification and design, without assuming any one of these.

**Scope**

The main area of application for SDL is the description of the behaviour of aspects of telecommunications systems. Applications include:

– call processing (e.g. call handling, telephony signalling, metering) in stored programme control (SPC) switching systems;
– maintenance and fault treatment (e.g. alarms, automatic fault clearance, routine tests) in general telecommunications systems;
– system control (e.g. overload control, modification and extension procedures);
– data communication protocols.

SDL can of course also be used for the description of any behaviour capable of being described using a discrete model, i.e. communicating with its environment by discrete messages.

A description of SDL is given in ITU-T Recommendation Z.100.