# Issue 431 –55th SIG meeting

## NEW definition

**Class**: A class is a category of items that share one or more common traits serving as criteria to identify the items belonging to the class. These **properties** need not be explicitly formulated in logical terms, but may be described in a text (here called a **scope note**) that refers to a common conceptualisation of domain experts. The sum of these traits is called the intension of the class and constitutes its definition. In the CRM, a class is identified by an alphanumeric code and a name, for mnemonic reasons, which should not be regarded as definition. A class may be the **domain** or **range** of none, one or more properties formally defined in a model. The formally defined properties need not be part of the intension of their domains or ranges: such properties are optional. An item that belongs to a class is called an **instance** of this class. In any interpretation, or possible world, a class is associated with a set of real-life individuals, known as the extension of the class in that interpretation. The sum of the extensions over all interpretations equals to the intension of the class. Here “open” is used in the sense that it is generally beyond our capabilities to know all instances of a class in the world and indeed that the future may bring new instances about at any time (**Open World**). Therefore, a class cannot be defined by enumerating its instances. A class plays a role analogous to a grammatical noun, and can be completely defined without reference to any other construct (unlike properties, which must have an unambiguously defined domain and range). In some contexts, the terms individual class, entity or node are used synonymously with class.

## OLD definition

**Class**: A class is a category of items that share one or more common traits serving as criteria to identify the items belonging to the class. These **properties** need not be explicitly formulated in logical terms, but may be described in a text (here called a **scope note**) that refers to a common conceptualisation of domain experts. The sum of these traits is called the intension of the class *and constitutes its definition. In the CRM, a class is identified by an alphanumeric code and a name, for mnemonic reasons, which should not be regarded as definition.* A class may be the **domain** or **range** of none, one or more properties formally defined in a model. The formally defined properties need not be part of the intension of their domains or ranges: such properties are optional. An item that belongs to a class is called an **instance** of this class. A class is associated with an open set of real life instances, known as the **extension** of the class. Here “open” is used in the sense that it is generally beyond our capabilities to know all instances of a class in the world and indeed that the future may bring new instances about at any time (**Open World**). Therefore, a class cannot be defined by enumerating its instances. A class plays a role analogous to a grammatical noun, and can be completely defined without reference to any other construct (unlike properties, which must have an unambiguously defined domain and range). In some contexts, the terms individual class, entity or node are used synonymously with class.