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Dentistry - Vocabulary and designation system for forensic oro-dental data (ISO 20888:2020)

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ICS 11.060.01

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 20888

November 2020

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English Version

Dentistry - Vocabulary and designation system for forensic oro-dental data (ISO 20888:2020)

Médecine bucco-dentaire - Vocabulaire et code de désignation des données bucco-dentaires médico-légales (ISO 20888:2020)

Zahnheilkunde - Terminologie für forensische orodentale Daten (ISO 20888:2020)

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European foreword

This document (EN ISO 20888:2020) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 “Dentistry” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest by May 2021.

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Endorsement notice

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 3, *Terminology,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

0.1 Background

The establishment of a positive identification of an unidentified individual by the comparative dental analysis of a forensic odontologist requires submission of supporting documentation from the dental professionals who treated the patient. This information includes dental treatment records, radiographs, photographs, and dental casts; this information is then submitted to the appropriate authority and referred to as antemortem dental data (AM). Currently, the vast majority of antemortem dental data and associated attachments are submitted on paper and by radiographic film, however, the goal is to create a standardized electronic format for the transfer of this data. Due to varying methods of documentation and recording systems, an organized list of standardized dental terminology would be useful. Submission of ambiguous information due to a lack of harmonization can increase the time required to establish the identification through dental means.

The disaster victim identification (DVI) community, due to the number of victims and the number of countries of origin of the victims, will benefit from this internationally standardized forensic oro-dental data, by using standardized terminology of useful concepts.

Current odontological comparison software is based on the concept of restoration comparison. Utilizing each tooth as a field, comparison and/or elimination queries and advance sorting algorithms creates a ranking of possible matches to aid the forensic odontologist in the initial records comparison. Biometric, familial, radiographic, and visual information support the likelihood of a match. By standardizing the descriptors used to describe this information, the likelihood of identifying an individual based on the forensic odontologist's data increases.

0.2 Principle

Many descriptors of a tooth are determined from radiographic interpretation; specific “similar” radiographic attributes are grouped together into single unified descriptors. This should allow for the unambiguous interpretation of a tooth attribute and ensure that a radiographic attribute can be described by a single unified attribute. Generally, consistency of assigning a unique attribute to a radiographic feature is utilized in this document in order to create unambiguous descriptors even at the expense of combining similar, but not identical, attributes.

The permanent dentition takes priority when both the primary and permanent teeth are present if both are concurrently visible in the mouth; however, the presence of the primary tooth should also be noted.

The pertinence of these descriptors should be weighted with the time differences between the date of the records and the presumptive date of recording of the current data.

If a descriptor involves multiple teeth, then that descriptor shall be utilized for all the teeth involved.

0.3 Rationale

A significant volume of information is gathered during dental evaluation and treatment. Forensic odontologists charged with the task of identifying individuals need comprehensive information in order to prove or disprove identification. While much of the information gathered by the dentist might not aid in claims adjudication, it is not possible to predict in advance what item or items in the dental record might be conclusive in identification. This document is designed to fill a void by establishing documentation requirements for the submission of antemortem dental information for identification.

Terms and definitions describing teeth, pathology or anomaly of teeth or tooth restorations are limited to ISO 3950 oro-dental codes that map to individual teeth.

Terms and definitions describing multiple teeth, jaw or mouth conditions, pathologies, relationships, or prostheses are limited to ISO 3950 oro-dental codes that map those entities.

Terms and definitions which are limited to other specific ISO 3950 oro-dental locations are annotated accordingly in the notes to entry and related annexes.

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Terms and definitions describing dental devices, pathologies, or entities that do not have a specific location are limited to ISO 3950 code 00, 01, 02 and the notes to entry and related annexes.

An entry with a “(by report)” notation indicates that optional free-form text can be included with the term to further characterize the entity being described. See Figure 1.

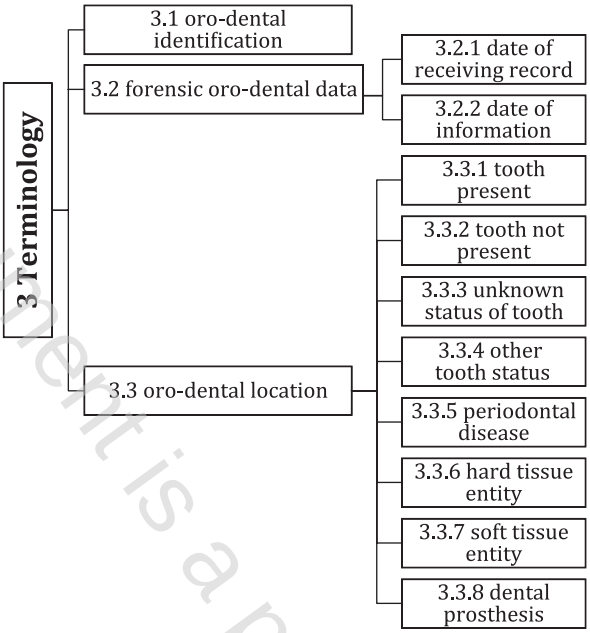


Figure 1 — Overview of the main elements of Clause 3

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Dentistry — Vocabulary and designation system for forensic oro-dental data

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1 Scope

This document defines the terms used to describe the distinctive characteristics of an individual's mouth by dentists and forensic dental experts. These terms are organized by concepts based on a forensic approach to the characteristics of a mouth, with many concepts specific to the identification domain that are not defined elsewhere in ISO dentistry vocabularies (e.g. "*present tooth*").

The hierarchical structure of this document is designed to describe attributes of a tooth, the mouth and a prosthesis/orthosis with increasing levels of discriminative characteristics (e.g. material characteristics, *restored tooth* surface) and the possibility to connect any level of description of an attribute with the most comprehensive concept.

This document is intended to be used for data exchange between antemortem and postmortem files and remove ambiguity on the terms used to describe an individual's mouth.

This document is intended to be used in conjunction with ISO 1942 and ISO 3950.

2 Normative references

The following documents are referred to in the text in such a way that some or all their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1942, *Dentistry — Vocabulary*

ISO 3950, *Dentistry — Designation system for teeth and areas of the oral cavity*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
oro-dental identification
science and art of comparing *antemortem dental data* (3.2.2.1) with *postmortem dental data* (3.2.2.2) to help determine the identity of an individual

3.2
forensic oro-dental data
recorded information describing the oral cavity and surrounding tissues for legal purposes

3.2.1
date of receiving record
date when the forensic information is recorded in the forensic record

Note 1 to entry: The date of receiving record is determined using ISO 8601-1.

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