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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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Replacing GB/T 14950-1994

Terms of photogrammetry and remote sensing

摄影测量与遥感术语

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1 Scope

GB/T 14950-2009 is the Chinese national standard on terms of photogrammetry and remote sensing, in the field of natural and applied sciences. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 6 February 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2009. Classification: ICS 07.040, CCS A77. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard specifies the terms and definitions of photogrammetry and remote sensing, with English and Chinese indexes (Translator note. this translation version only provides English index). This Standard is applicable to the establishment of photogrammetry and remote sensing standards, the preparation of technical documents, the compilation of teaching materials, books and literature.

2 Classification of photogrammetry

2.1 photogrammetry A scientific technique that uses photographic image information to determine the shape, size, spatial location, properties, and relationship of the object.

2.2 aerophotogrammetry; aerial photogrammetry A photogrammetry that is performed by the images that are acquired by aviation vehicles.

2.3 space photogrammetry A photogrammetry that is performed by the images that are acquired by spacecrafts.

2.9 close-range photogrammetry A photogrammetry that is performed by the stereo image obtained from a target with an object distance of not more than 300m.

2.10 microphotogrammetry; ultra-close-range photogrammetry Macro photogrammetry

2.11 ballistic A photogrammetry that uses a ballistic camera, takes starry sky as background, to get the status of a flying object in the air and is used to study the flight path of the flying object.

2.18 underwater photogrammetry A photogrammetry that is used to map underwater terrain or study underwater objects.

2.19 real-time photogrammetry A photogrammetry that is completed quickly in real time, that integrates data acquisition, processing and output of results.

2.20 Moire topography A photogrammetry that uses the Moire effect to form an equivalent fringe directly on the surface of the measured object.

2.21 side-looking radar survey A photogrammetry that uses a side-view radar to obtain ground target image information.

3 Classification of remote sensing

3.1 Remote sensing A modern scientific technique that does not touch the object itself, that uses a sensor to collect the electromagnetic wave information of the target, that, after processing and analysis, identifies the target, reveals its geometry, physical characteristics and interrelationships, and their changes.

3.2 remote sensing platform A carrier to place sensors that can perform remote sensing operation.

3.3 aerial remote sensing; airborne remote sensing A remote sensing that is based on aero planes such as airplanes, airships, and balloons.

3.10 microwave remote sensing A remote sensing of which the working band of the sensor is limited to the range of the microwave band.

3.11 active remote sensing A remote sensing method that the sensor emits a certain frequency of electromagnetic radiation to the target, and then receives the radiation information returned from the target.

3.12 passive remote sensing A remote sensing method that receives radiation information directly from the target.

4 Data acquisition

4.1 photography A technique that uses sensors to obtain object images and other related information.

4.2 space photography A photography of the earth or other cosmic space planets from outside the earth's atmosphere, that uses spacecrafts such as satellites, spacecraft, space shuttles and orbiting space stations as platforms.

4.7 oblique photography A photography that the main optical axis of the camera deviates from the vertical or horizontal direction and is carried out at a certain tilt angle.

4.8 high-altitude aerial photography An aerial photography that the photography height is higher than 6000m.

4.9 low-altitude aerial photography An aerial photography that the photography height is lower than 1000m.

4.15 black-and-white photography A photography that expresses the image of the photographed subject in different shades of black, gray and white.

4.16 colour photography A photography that reproduces color images of the photographed subject in rich colors.

4.17 infrared photography A photography that obtains the infrared spectrum information of the photographed subject.

4.27 radar navigation A navigation method that uses a radar to determine the position and guides moving objects to navigate.

4.28 Doppler navigation A navigation method that uses Doppler effect to measure motion parameters and position of moving objects.

4.29 inertial navigation A navigation method that uses an inertial sensing device to measure acceleration to estimate the speed and position of moving objects.

4.30 global navigation satellite system; GNSS A general term for systems that use satellites for global navigation and positioning.

5 Data processing

5.1 photographic processing A processing process that reveals the exposed photosensitive material into a visible image according to a certain processing process.

5.10 electronic printing A photographic method that uses a cathode ray tube for scanning exposure and automatic homogenization.

5.11 photo rectification; rectification of photograph An operating process of converting an oblique photo into a horizontal photo of a predetermined scale through projection conversion.

5.12 elements of interior orientation; interior orientation elements Directional elements inside photo Basic parameters to determine the geometric relationship of the photographic beam on the image side, that is, the image plane coordinate values (x_0 , y_0) of the principal

point and the camera principal distance value (f_k).

5.37 affine rectification A transformation method that maintains parallelism of straight lines in images before and after transformation.

5.38 optical differential rectification Gap rectification Differential correction that uses an orthographic projection device of optical projection type to scan and expose the photo image one by one correction unit.

5.39 electronic differential rectification Differential rectification that is realized by flying spot scanning tubes.

5.40 analytical rectification Differential rectification that is realized by an analytical method on an orthographic projector according to photo fragmented surface data or digital elevation models.

5.51 epipolar ray; epipolar line A line of intersection a plane (kernel plane) and a photo plane passing through the photographic baseline and the target point.

5.52 epipolar ray image An image without vertical parallax obtained by resampling from the original image along the epipolar line.

6 Results

6.1 aerial photograph A photo containing surface image information that is taken from the air to the ground by a camera.

6.2 index to photography A retrieval map that is created by taking photographic districts or picture frames as the unit, arranging the photos in the order of the photographic route number and the photo number to overlap and reduce the photos.

6.9 photo mosaic An image map that is inlaid after using multiple remote sensing images without geometric correction, stitching according to the main corresponding feature, after removing the overlapping images.

6.10 aerophotogrammetric original An original topographic map that is prepared by aerial photogrammetry.

6.11 reprographic original An aerial photograph that is reproduced by photographic methods.

6.23 stereophoto map A map that consists of an orthophoto map and a stereo paired image map.

6.24 digital map A map represented by a certain data organization method in the form of a geospatial data collection.

6.25 digital line graph; DLG A geographic information dataset that represents terrain features in vector data.