P2671

Submitter Email: mayy@cesi.cn
Type of Project: New IEEE Standard
PAR Request Date: 15-Oct-2017
PAR Approval Date: 06-Dec-2017
PAR Expiration Date: 31-Dec-2021
Status: PAR for a New IEEE Standard

1.1 Project Number: P2671
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for General Requirements of Online Detection Based on Machine Vision in Intelligent Manufacturing

3.1 Working Group: Online Detection Working Group (C/SAB/OD_WG)
Contact Information for Working Group Chair
   Name: Jonathan Yung Cheng Chang
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   None

3.2 Sponsoring Society and Committee: IEEE Computer Society/Standards Activities Board (C/SAB)
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4.1 Type of Ballot: Entity
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 10/2020
4.3 Projected Completion Date for Submittal to RevCom
   Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 05/2021

5.1 Approximate number of entities expected to be actively involved in the development of this project: 7
5.2 Scope: This standard specifies through the general requirements of online detection based on machine vision, including requirements for data format, data transmission processes, definition of application scenarios and performance metrics for evaluating the effect of online detection deployment.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: The purpose of this standard is to provide requirements of data format, data quality, descriptive application scenarios and performance metrics to enable improved production processes through novel online defect detection on machine vision technologies.

5.5 Need for the Project: Currently there is no standard for online detection based on machine vision.
   Online detection based on machine vision integrates with machine vision, RFID, sensor networks and other new generation of information technology and artificial intelligence technology, and can effectively protect the product accuracy in the aspects of dimensional controls, accurate positioning, feature matching etc.. Compared with the traditional detection method, the application of on-line detection based on machine vision can greatly improve the efficiency of detection, reduce the defective rate and improve the consistency of production. In manufacturing enterprises of integrated circuits, automotive, steel and other industries, online detection based on machine vision has become more and more popular.
   In terms of the enterprise level, the standard for online detection based on machine vision can help enterprises to implement the online detection technology, strengthen quality control, reduce defective rate, and improve production consistency. Moreover, this standard can be applicable to guide the procurement and installation process of online detection system based on machine vision, and can be used as a reference for a company to evaluate the system performance.
5.6 Stakeholders for the Standard: Discrete and Processing Manufacturing Enterprises, Manufacturers, Equipment Suppliers, Components and Parts Suppliers, Solution Providers, Production Line Implementation and Advisory Service Suppliers.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes: