

Desktop - The foundation module for managing the TDP and identifying characteristics and requirements.			
Features	Benefits	DISCUS	Competition
Manage multiple drawings and documents for a TDP	Helps reduce quality escapes that come from overlooking requirements	YES	YES
Opens files in PDF and TIFF formats	Supports most common formats used to share electronic drawings and specs. No data conversion necessary	YES	YES
Multi-panel user interface with links for the TDP	Provides intuitive interface to view the source and relationships of requirements	YES	YES
Drop and drag to easily balloon 2D drawing	Allows for very efficient identification and disposition of characteristics	YES	YES
Customizable balloon numbering with groups	Supports balloon identification that is consistent with existing systems	YES	NO
Extract requirements from other documents such as specs	Enables the explicit inclusion of requirements from specifications	YES	NO
Capture characteristic requirements as an image	Minimizes manual data entry by capturing annotations in an image format	YES	Unknown
Capture characteristic requirements in structured format	Enables formatting of requirements for semantically-enriched downstream use	YES	YES
Copy, paste, and duplicate characteristics and balloons	Provides even greater efficiency in characteristic identification	YES	NO
Customizable balloon properties such as shapes, sizes, and colors	Enables support of company and/or customer- specific formats	YES	YES
Customizable drawing grid layout	Minimizes manual data entry by automatically capturing sheet and zone	YES	YES
Text markup of drawing along with leader lines	Improves communication by allowing customized information to appear on drawing	YES	Unknown
Generates a customizable Bill of Characteristics	Consolidates all requirements into accountability check list, keeping balloon drawing and inspection sheet in synch	YES	YES
Saved profiles for efficiently supporting multiple customers	Enables quick configuration to support multiple customer formats. Use same process and tool for all customers	YES	NO
Export Bill of Characteristics to customizable Excel reports	Provides format for additional downstream applications such as inspection sheets, setup sheets, etc.	YES	YES
Certified to export to FAI systems at Lockheed, Rolls, Pratt	Reduces time and labor to submit first article inspection data to customers	YES	Partially
Export ballooned drawing to PDF	Captures ballooning information in a very professional and easy-to-share format	YES	YES
Simple installation and configuration	Reduces the cost associated with having an IT or computer specialist get it up and running	YES	YES
Years in business	3 Times more experience than closest competitor, large customer base, and mature support tools and processes.	8	3
CSV file upload for Forms 1 and 2	Re-usability and eliminate redundancy	YES	NO



Planner - Manage characteristics by specific operation including the creation of process illustrations and work instructions.			
Features	Benefits	DISCUS	Competition
Maintain a routing and defined operations for a specific part	Reduces the effort to coordinate characteristic planning with other systems such as ERP	YES	NO
Maintain routing templates with reusable information	Reduces the time and labor to create comprehensive process planning documentation	YES	NO
Customizable inspection methods, sampling plans, etc.	Ensures that system works with existing databases and terminology	YES	NO
Assign characteristics to specific operation where produced	Ensures that all characteristics are being properly defined throughout the production lifecycle	YES	NO
Review application of Characteristics by operation	Reduces quality escapes by helping to validate the changes in characteristic values between operations	YES	NO
Create work instructions and process illustrations for each operation	Improve yield by enabling production personnel to concentrate on requirements for the specific operation	YES	NO
Automatically create operation inspection characteristics	Reduce the time and labor to create comprehensive process planning documentation	YES	NO
Text markup of illustrations by operation	Improves communication by allowing customized information for each operation	YES	NO
Filter Characteristics and display drawings side-by- side	Reduces time to link related characteristics and ensures that all characteristics have been properly assigned	YES	NO
Export a complete process plan with instructions, illustrations, etc.	Reduces the time and labor to create comprehensive process planning documentation	YES	NO
Export Characteristics and operations to customizable Excel reports	Provides format for additional downstream applications such as inspection sheets, setup sheets, etc.	YES	NO

<u>CMM</u> - Import results from CMM Reports and incorporate the values into DISCUS Results and inspection reports.			
Features	Benefits	DISCUS	Competition
Entry and formatting of results automatically from a CMM Report	Reduces manual data entry associated with reading CMM reports and entering onto a formal FAI report	YES	YES
Automatic issue checking of CMM Report versus the Bill of Characteristics	Reduces quality escapes by capturing transcription errors in CMM programming and FAI reporting	YES	YES
Ability to Suggest mapping of CMM axes to characteristics	Reduces time for mapping of the CMM Report to an FAI, reducing potential quality escapes	YES	NO
Backfill to create an FAI & ballooned drawing from a CMM Report	Enables the rapid creation of a customer- acceptable report from a CMM Report	YES	NO



<u>3D</u> - Interrogate the native 3D CAD model (CATIA, Pro/E, NX, Solidworks and many other formats) and annotations to automatically identify characteristics and illustrations.

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Features	Benefits	DISCUS	Competition
Incorporates CAD models into the TDP	Ensures that CAD model along with other documents are captured and organized	YES	NO
Open native CAD model formats - CATIA, Pro/E, NX, SolidWorks	Supports most common formats used to share CAD models. No CAD software or data conversion necessary	YES	Yes*
Interrogate and extract requirements data from 3D models	Reduces time and labor to understand model and identify characteristics	YES	Yes*
Automatically create Bill of Characteristics from models with PMI	Reduces dramatically the time and labor to identify characteristics	YES	Unknown*
Create characteristics by measuring model features	Reduces time and labor to identify characteristics that are not addressed by PMI/annotations	YES	Unknown*
Automatically create illustration views with balloons	Reduces time and labor to create documentation for FAI, in-process inspection, etc.	YES	Unknown*
Selectively filter the display of datums, balloons, and annotations	Improves communication by eliminating extraneous information from the display	YES	Unknown*
Customizable illustration views using multiple model parameters	Ensures that 3D view of part is sensible to viewers accustomed to simple 2D drawings	YES	NO
Export illustrations with balloons to 2D PDF	Supports the legacy world where users are accustomed to 2D layouts	YES	NO
Export ballooned CAD model to 3D PDF	Provides means for sharing characteristic requirements in the 3D model-based enterprise	YES	NO
No additional native CAD tool license required	Cost savings and speed to implementation accelerated.	YES	NO
Use the same tool and UI user interface on all CAD model formats.	Easy to use, adaptable to the CAD application of your choice.	YES	NO

^{*}Not part of the native tool – is handled by a plugin to the CAD Tool

<u>OCR</u> (Optical Character Recognition) - Use Optical Character Recognition to help extract characteristics from drawing images and specification documents.

Features	Benefits	DISCUS	Competition
Convert and intelligently extract some annotation from a drawing	Reduces data entry labor and errors with automatic recognition of notes and dimensions	YES	YES
Convert and extract text from scanned documents	Reduces data entry by extracting requirements from material & process specifications	YES	NO
Customizable scan and recognition settings	Improves auto-recognition by customizing for specific drawings	YES	YES
View the converted text along with the original captured image	Improves effort by helping to quickly identify areas where ambiguity exists	YES	Unknown
Recognize GD&T symbols and Feature Control Frame	Improves time savings by quickly filling in form 3 with correct symbols	YES	NO*

^{*}they do recognize a diameter symbol



Results - Enter actual result values for the characteristics and have the system automatically validate compliance.			
Features	Benefits	DISCUS	Competition
Entry of results in tabular format for data entry	Reduces manual data entry associated with recording actual results	YES	Unknown
Automatic verification of results versus characteristic requirements	Reduces labor by checking that the results pass or fail against the requirements	YES	YES
Result status shown in real-time on drawing & Bill of Characteristics	Ensures that requirement violations are not overlooked, reducing potential quality escapes	YES	YES
Customizable results fields for data entry	Allows the results data to easily interoperate with existing reporting requirements	YES	NO
Results data exportable to customer FAI systems	Reduces even more, the time and labor to submit inspection data to customers	YES	YES
Save settings for everyone to use	Companywide time savings, eliminates manual data entry	YES	NO