



Version 5.9

Document Control

Product Description

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Product Description

The FORCAM FORCE™ DNC Management and DNC Communication is a powerful tool for managing and transferring DNC programs. As well as NC programs, other arbitrary files can be managed and presented. Visualization is effected via the visualization options offered by the browser (MIME types) or via special customer-specific viewers.

It is just as possible to import data regularly from a PDM tool as it is to manually import files. Files can be transferred from and to the machine via serial protocols or TCP/IP.

Management using the Office Client

Packages and elements

Central management of any files, which come from an external system by cyclical file import, are created manually by the user, or come from the NC machine.

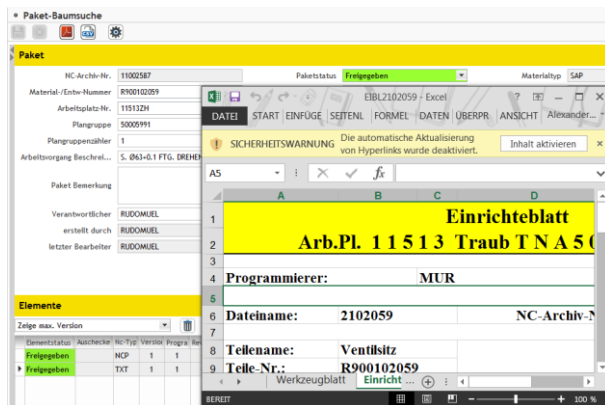
They are filed in production folders (so-called packages). Each production folder comprises a header data with keywords and an arbitrary number of elements (files with additional information columns, such as versioning, editing status, comments, etc.).

Files can be managed with or without versioning. Files found in several packages exist only once in reality. This means that all versions and variants of a file (e.g. by retransfer from the machine) are known in all packages.

All files are filed in the database. The files can be copied by replication and security mechanisms to different server directories. All user actions are logged (duty to provide proof) and can be traced in the user log. All transfers from and to the machine are also logged.

Arbitrary comparison editors or post processors can be called via customer-specific interfaces.

A compare function lists all of them on the machine and facilitates the comparison between this program created in the workshop and the original version.

Paket-Saumsuche

Suche:

Paket

NC-Archiv-Nr.: 11002306
 Material-/Entw.-Nummer: 8700124740
 Arbeitsplatz-Nr.: 1149PCP
 Plangruppe: 5001407
 Arbeitsvorgang Beschreib...: Bearbeitung Kompl.
 Paket Beschreibung:
 Verantwortlicher:
 erstellt durch: MURIEL
 letzter Bearbeiter:
 erstellt am: 22.06.2015 07:54:29
 letzte Änderung am:

Elemente

Zeige max. Version

Element	NC-Archiv-Nr.	Material-/Entw.-Nummer	Arbeitsplatz-Nr.	Plangruppe	Arbeitsvorgang	Revisionsstand	Element	Benennung	Einrichtung	Quell
Neu	11002306	8700124740	1149PCP	5001407	1	1	H	124740	Programme Komplett	DFP FDM
Neu	11002306	8700124740	1149PCP	5001407	2	1	H	124740	Aufbauplan Komplett	DWG FDM
Neu	11002306	8700124740	1149PCP	5001407	3	1	H	124740	Hauptpunkte Komplett	XLS FDM
Neu	11002306	8700124740	1149PCP	5001407	4	1	H	124740	Werkzeugliste Komplett	XLS FDM

Search functions

Search all keywords in the package header.
 The search can be carried out using a tree
 (built up from the keywords or....

Pakete suchen

Such-Vorlage: **Komplettsuche**

NC-Archiv-Nr.

Paketstatus

Material-/Entw.-Nummer

Arbeitsplatz-Nr.

Materialtext

Revisionsstand

Arbeitsvorgang Beschreib...

Plangruppe

Plangruppennummer

Arbeitsfolge Nr.

Arbeitsvorgang Nr.

Avor gültig ab

erstellt durch

letzter Bearbeiter

erstellt am

letzte Änderung am

Edittierstatus

...by directly searching for keywords.
 Various search templates can be created.

Elemente suchen

Such-Vorlage: **Erweiterte Suche**

Arbeitsplatz-Nr.

Datensatz-Nr.

Elementstatus

Quelle

NC-Typ

Version

Programmnummer

Revisionsstand

VK

Ersteller (Element)

Suchergebnisse

Element	NC-Typ	Verl.	Program.	Rev.	Datensatz-Nr.	Element	Benennung
Gespeert	PDF	1	2	E	ALTES EINRICHTBLATT	Altes Einrichtb	
Gespeert	PDF	1	2	E	ALTES EINRICHTBLATT	Altes Einrichtb	
Gespeert	WWL	1	1	AC	Einrichtblatt_TP_40	Werkzeugliste C	
Freigegeben	WZP	1	1	K	EINRICHTBLATT_15868	Einrichtblatt	
Freigegeben	WZP	1	1	G	EINRICHTBLATT_82371	Einrichtblatt	
Freigegeben	WZP	1	1	B	einrichtblatt_9013780	Einrichtblatt	
Freigegeben	WZP	1	1	K	EINRICHTBLATT_89001	Einrichtblatt	
Gespeert	WZP	3	1	B	einrichtblatt_8900021	Einrichtblatt	
Gespeert	WZP	2	1	B	einrichtblatt_8900021	Einrichtblatt	
Gespeert	WZP	1	1	B	einrichtblatt_8900021	Einrichtblatt	
Freigegeben	WZP	1	1	A	EINRICHTBLATT_89007	Einrichtblatt	
Freigegeben	WZP	1	1	B	EINRICHTBLATT_89008	Einrichtblatt	

Element functions

Search all element attributes irrespective of
 the allocation to packages

Worker Client

Displaying the files

Shop Floor Terminal					
KT504031 / 4.3	Material	A203434			Anzeigen
KT504041 / 4.4	Material	A203434			
KT504051 / 4.5	PaketKey3				
KT504061 / 4.6	PaketKey4				Senden
Element-Status	NC-Typ	Programm	Revision	Element-Bemerkung	Empfangen
Neu	ZEI	1	C	Aufspannplan 1. Spannung	Status
Neu	NCP	1	C	Programm 1. Spannung	
Neu	WZP	2	C	Werkzeugblatt 1. Spannung	
					Protokoll

Initiate transfer of NC programs from one industrial computer and visualization of all files to a package (electronic production folder). The link between package and order can be configured as required upon application.

The NC programs can be filed per machine or per machine group (machines with the same control system).

The transfer status is displayed with the function. The user sees what he is doing and what is happening in the transfer.

This also applies to the retransfer of programs or configuration data optimized on the machine.

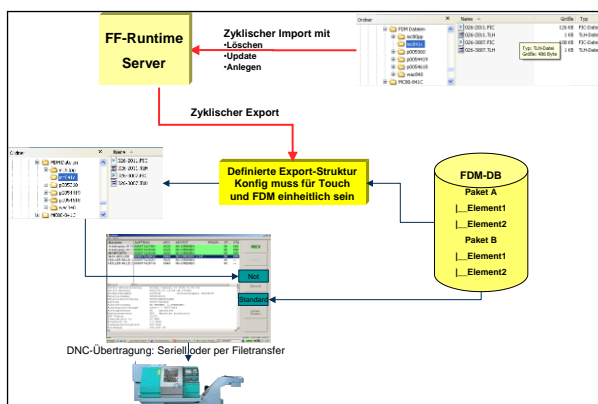
Ausgewählt	Breite	Ausrichtung	Verfügbar
Elementstatus	80	Links	Letzte Übertragung
Auschecker	60	Links	Übertragung zu APL
Nc-Typ	40	Links	Häufigkeit der Übertragung...
Version	40	Mittig	Letzte Rückübertragung
Programmnummer	40	Mittig	Rückübertragung von APL
Revisionsstand	40	Mittig	Häufigkeit der Rückübertra...
Dateiname	130	Links	Steuerung
Element Bemerkung	250	Links	Cutmodus
Dateiendung	70	Links	Element User 4
Quelle	50	Links	Element User 5

Configuring the columns

The same configuration options are available as those in the management.

Columns are configured independently of the management setting

Transfer



This facilitates the transfer of individual or linked NC programs, presetting data, and help files (graphics, instructions, operating data ...) between CNC-controlled machine tools and network computers.

The files can be automatically edited during transfer and additional processing operations can be triggered.

Files can be sent and received via the Office Client, the Worker Client or via the control panels on the machines (ordering program). The files can be transferred by serial communication or by TCP/IP (copy FTP or file).

They are transferred either directly from the database or from a file directory. All transfers are logged.

Communication Monitor

Start Zeit: 2016-18-02 09:20

Arbeitsplatz: KT504031 / Larger Tandem


NC Element: Mainprog.NC

Übertragungsricht: PC >> DNC

Bytes: 12

Gesamtbytes: 12344

Status: Send

Übertragung: 

Cancel transmission

Transfer monitor

Files can be transferred from both the shop floor terminal and from the FDM management.

The active transmission is displayed on the communication monitor.

DNC Order Generator - FORCAM GmbH

Generator

NCA Nr.:

Version:

Selektiert...: \\kswnts1\transfer\ma

Typ: ☒ NC -> PC
☐ PC -> NC
☐ Neu -> NC

Program...: ☐ Hauptprogram
☐ Unterprogram
☐ Zusatz TOP

Fehlertext: \\kswnts1\transfer\ma\error.txt enthält eine ungültige Pfadangabe.

Anfordern

Senden

Datei auswählen

Quit

Requesting NC programs via the ordering program from the machine

An NC program is created on the machine. The NC program is filed in a preconfigured path, together with an "order" file. The transfer is triggered with the aid of this file by means of FDM.

The program is uploaded to FDM. The configurable program names show that this is an ordering program and not a WEP. The ordering program can run on all Windows systems from WIN95. The individual spacing and size of the visualization elements can be changed via a configuration file. The buttons can be arranged horizontally and vertically.

Logs

Maschinenstatus

Suchergebnisse

Maschine	Letzte Übertragung	Datenname	Fehlercode	Fehlerbeschreibung
40736	22.01.2015 01:20:30	812159VIA.NCP	-1	com.forcam.nu.fdm.server.dnc...
40649CP	21.01.2015 10:09:51	R900823710.NCP	0	
15223CP	20.01.2015 07:56:15		0	
15002CP	20.01.2015 08:19:35		0	

Letzte Übertragung: 12.01.2015 00:00:00 | 19.02.2015 23:59:59

Datenname:

Version:

Quelle:

Nc-Typ:

Übertragene Bytes:

Fehlercode:

Fehlerbeschreibung:

Bearbeiter:

Machine status

User logbook

FDM-Benutzerlog		Suchergebnisse		
Benutzer		Benutzer	Zeitpunkt	Text
Zeitpunkt	11.05.2016 00:00:00	SYSTEM	13.05.2016 12:09:50	Element checked out: Element-E1725...
Text		SYSTEM	13.05.2016 12:10:14	Element reverted: Element-E1725.TXT...

Contains a log of all user activities, such as the creation, deletion, transfer or receiving of files

Feature Specification

Management

- Strictly defined header data in Version 5.4.6

Paket editieren			
NC-Archiv-Nr.	15002332	Paketstatus	Freigegeben
Material-/Entw-Nummer	R900769240	Materialtext	PLATTE AGEV1-36259-1-1/FE/ZN12D
Arbeitsplatz-Nr.	15084	Arbeitsplatz-Bezeichnung	FML100 BAZ Hüller Hille NBH170
Arbeitsvorgang Nr.	0010	Verantwortlicher	SCS1LO
Paket Bemerkung		erstellt durch	BURKHERR
		erstellt am	18.04.2002 07:31:36
		letzter Bearbeiter	SCS1LO
		letzte Änderung am	08.06.2011 13:18:51

- Any definition of keywords (search terms) from Version 5.4.7
- Any number of element columns
- Manual or cyclical importing of files
- Automatic copying to any file directories
- Logbook with filter functions
- Define timeout times for send and receive functions (per terminal)
- Assign security settings for users
- Visually display serial transfer in different character sets and save to a file
- Send and receive individual characters and character strings
- Configure terminal interfaces (software assistant)
- Analyze logs (showing character exchange)
- Configure display texts for messages to the CNC control system
- Arbitrary construction of tree structures based on the package keywords
- Free definitions of up to 5 key fields (link to the order) and 15 keywords for packages
- Search filter for package and element keywords (search terms)
- Arbitrary arrangement of columns in the element display
- Manual import of data from a file structure
- Manual export of all packages and elements in a freely definable file structure (construction of the subdirectories from the package keywords)
- Separate deletion of packages and elements. This means that elements can be available but are not visible for further processing
- Files and elements which are edited externally are automatically locked (check out)
- Checked out files are automatically released again during check in. The check-out switch can also be reset via the management
- Creation of packages and elements
- List of all programs which have been workshop optimized. Call up of the compare editor from this list
- Free linking of packages and elements
- List of the package functions

- Create elements and check in allocated files
- Display the element with programs allocated to MIME types
- Copy the element
- Compare programs / files using an external or internal editor
- Link files with several packages
- Start any external program for further processing (e.g. post processor)
- Display with any external editors
- Transfer files of a defined type to the machine or receive them by the machine

Data import

- Import any files
- The package status and keywords can be read from a control file
- The allocation of keywords from the control file to fields in the database can be configured freely
- Control commands can be configured freely
- Data can be imported with or without a data update
- Following the import, the contents of the import directory can be deleted
- The import can be started manually from within the FDM management or automatically per FFServer
- The control files must be located in an import directory. The associated data in subdirectories which is determined from the control file data
- Elements which can appear in several packages can be imported with or without a link

Data export

- Export trigger activated manually via the FDM management or cyclically using FFRuntime
- Export occurs per FTP or by copying into a file directory
- Definition of several independent export tasks
- Export to a backup directory and to a standard directory
- Create export subdirectories from the package keywords
- Filter for selecting specific files for export

Transfer - Receive

- Collect programs and files from a network computer. (Computer and directory can be specified)
- Trigger the collection of several programs via a control program (consecutive transfer)
- Automatic collection of dependent files (preset files, help files)
- Trigger receipt via auxiliary device (terminal with serial interface, such as Siemens OP terminals)

Transfer - Send

- Send programs and files to a network computer. (Computer and directory can be specified)
- Define program and file names for saving.
- Define program and file status ("Optimized" function)
- Trigger program actions on a network computer (e.g. subsequent program editing, operating data report, database entries...)

Automatic editing during send and receive

- Insert configurable characters of an arbitrary length at the beginning of the program (prefix)
- Insert configurable characters of an arbitrary length at the end of the program (suffix)
- Perform checksum calculation in accordance with prescribed algorithms.
- Change file name and/or extension.
- Change storage location (computer / directory)
- Exchange or delete individual characters or character groups.
- Compare files and log differences

Logbook functions

- Logbook with filter functions
- Logbook of import and export
- Log of all important user actions
- Send and receive log for each machine / control system
- Status report for the last program transfer

File formats for transfer

- Text formats: ANSI ISO ASCII EIA
- Binary formats: Machine-specific and image files

Media and logs

- Cable, wireless, dedicated line and dial-up connections with
- TCP/IP protocol (configurable port settings)
- Hardware- software handshake
- Manufacturer-specific serial logs

Storage media for NC programs and files

- All computer drives connectible via NFS or FTP

Supported serial - TCP/IP converter

- PC with WINDOWS NT 4.0, 2000, XP (software converter)