

Manual for using the cloud platform MTinfo 3000 to prepare for use of the ATWS 3000





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1. INTRODUCTION

This manual describes how to safely install and use the Automatic Track Warning System (ATWS) 3000. The role of the person who installs, removes and uses the ATWS 3000, is not part of this manual. This document describes the use of a single ATWS 3000 set, which consists of two DUU 3000 (Detection Units Ultrasonic) and tripods, a DUM 3000 (Detection Unit Manual) and a WUM 3000 (Warning Unit Manual).

It is possible to use more than two DUU 3000's or WUM 3000's, although this is not covered in this manual.

The ATWS 3000 detects trains and gives an automatic audible and visual warning to track workers. The DUU 3000's detect the trains and then send this data, wirelessly, to MTinfo 3000 which in turn communicates this to the WUM 3000. For setups that require it, a DUM 3000 can be used to manually strike out incoming trains.



a. Functioning of ATWS 3000

1. Strike in

A DUU 3000 detects a train that is approaching the work area.

2. Warning

As soon as the DUU 3000 detects an approaching train, it will send a signal to the WUM 3000 via MTinfo 3000. The WUM 3000 will give an audible and visual warning to warn users of the oncoming traffic.

3. Strike out

The detection of a train leaving the work area can be done in two ways:

- A second DUU 3000 can be positioned to detect the passing train (shown in the image above)
- A DUM 3000 can used to manually strike the train out

This manual is one of two that detail the entire ATWS 3000:

- The cloud platform MTinfo 3000 to prepare the ATWS 3000 for use
- Installing the ATWS 3000

1. CONTINUATION INTRODUCTION

To view the general features of MTinfo 3000, such as the use of My MTinfo, generating reports and using the knowledgebase, please see the general MTinfo 3000 user manual which, just like the manuals above, can be found on our website:

https://www.dualinventive.eu/en/downloads-knowledgebase

2. DEFINITIONS & TECHNICAL SPECIFICATIONS

a. Application of MTinfo 3000

The cloud platform, MTinfo 3000, enables the setup, design and management of projects to be undertaken remotely and to allow use (single or multiple) of the ATWS 3000 devices in a safe, effective and efficient manner. MTinfo 3000 can be used on any computer with an internet connection, once a user has been authenticated. MTinfo 3000 is an online application and does not require any software to be installed on your computer.

b. Minimum requirements

- Internet:
 - Broadband
- Computer:
 - Processor at least 1,5 GHz
 - Internal memory at least 2.048 MB
 - Videocard at least 512 MB
 - Screen resolution of at least 1366 bij 768 pixels
- Webbrowser:
 - Google Chrome (recommended)
 - Internet Explorer version 11 or above
- Adittional software:
 - Adobe Acrobat (recommended) to view PDF reports
 - Google Earth (for projects GPS-Track)

Dual Inventive does not take responsibility for the above equipment or software being incorrect or absent.

3. CONDITIONS & SAFETY INSTRUCTIONS



WARNING!

Please read all safety instructions carefully before using the ATWS 3000 to ensure you fully understand the system and how it works. When precautionary measures and safety instructions are not properly followed by the users there is a risk of electrocution, fire or even death.

a. Conditions for use

You may only use MTinfo 3000 when the following criteria are met

- You hold the MTinfo 3000 competency, and it is in date
- You have been assigned the appropriate user rights on MTinfo 3000
- You have been authorised to do so

As an MTinfo 3000 **manager** you are responsible for:

• Creating and managing users, and their respective rights for competent ATWS 3000 users in such a manner that misuse is avoided

As a **competent user** you are responsible for:

- usernames and passwords
- managing your password. Sharing your password with others is not allowed for safety reasons
- following the guidelines set out in the relevant rulebook
- the safety of the ATWS 3000. You should respond to alerts from the ATWS 3000 when something is not working correctly

b. Instructions

Use notes

- Dual Inventive will create the company and first user account (administrator) for the company. This user will become the nominated contact person inside your organisation
- Ensure that the software on your computer system is kept up-to-date, including your internet browser, Google Earth and the PDF reader. No additional maintenance is required
- The hardware you use could limit the connection to MTinfo 3000. Please discuss this with your IT administrator should you encounter any issues

Instructions for first use

- Ensure you have been certified and have the appropriate rights to use MTinfo 3000
- Always take care of your own safety within the track environment, ensuring you are compliant with all relevant legislation
- Always use a secure connection to MTinfo 3000. The connection is safe to use when the web address is preceded by 'https//'
- Upon starting MTinfo 3000 for the first time, MTinfo 3000 will ask your permission to share the location of your device with MTinfo 3000. By accepting this, you are giving MTinfo 3000 permission to use your location as the starting point for the real time status

4. GENERAL

MTinfo 3000 uses a set of recurring icons, actions and features. This chapter details what these are used for.

a. Icons and actions

Icon/Action		Explanation
×	Cancel	Cancel or close the current screen. Any changes will not be saved.
~	Check	Approve or reject the plan or design.
	Close project / show closed projects	Close the specified project or view all closed pro- jects when on the project overview screen.
+-	Create	Create new item.
Û	Delete	Delete selected item.
📥 📩	Download	Download selected item.
D	Duplicate	Duplicate selected item.
🧭 💉	Edit	Edit selected item.
2	Expand	Expand the selected work area.
₽ ~	Generate	Generate a report. Once selected, you can select the type of report you wish to generate.
>	Next	Continue to the next stage.

4. CONTINUATION GENERAL

Icoon/Actie		Uitleg	
	Perform task	Perform the specified task.	
¢	Previous	Go back.	
6	Project overview	Project Overview	
•	Real Time status	View Project Real Time status.	
	Save	Save item.	
Q	Search	Search.	
*	Shrink	Minimise the selected work area.	
±	Upload	Upload file.	
i	View task	View tasks assigned to you.	
	Your profile	View MTinfo 3000 profile.	



4. CONTINUATION GENERAL

b. Filter and sort

Within MTinfo 3000 you have the option to filter and/or sort items in a table. For example, the knowledgebase.

Filter

	Home >	Knowledgebase > Search				
Filter		2				
	-	Document name ∆⊽	Uploaded by △▽	Company ∆⊽	Date uploaded △▽	Action
Document name		bla.php		Audit",1"=&(())	2018-04-04 15:23:08	21
Optional		bla.sh		Audit";!-"=&(())	2018-04-05 13:21:30	21
Uploaded by		Checklist 08082017.docx	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:29:50	21
nult	0	IMG_20170804_101300.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21
Jort Elst	12	IMG_20170804_101301.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21
C		IMG_20170804_101302.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	11
Dual Inventive Pro	12	IMG_20170804_101320.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21
Audit":! "=&	2	IMG_20170804_101321 jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-10 16:24:00	21
		IMG_20170804_101328.jpg	Jort Eist	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	21
		IMG_20170804_101357.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	21

On the left side you will see the 'Filter'. By entering the document name (partially or as a whole) you can filter documents by name. By using the selection buttons you can choose to only view documents uploaded by certain users or companies.

The filter option is available for different overviews throughout MTinfo 3000 and the filter criteria differ per overview.

Knowledgebase	6)				
	iome 🔰	Knowledgebase > Search					v5.12.0
ilter							
		Document name ∆▼	Uploaded by △▽	Company ∆⊽	Date uploaded △▽	Action	8
ocument name		Checklist 08082017.docx	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:29:50	21	
optional		IMG_20170804_101300.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21	Ó
aloaded by		IMG_20170804_101301.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21	0
null	0	IMG_20170804_101302.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21	
Jort Elst	12	IMG_20170804_101320.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:37	21	
		IMG_20170804_101321.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-10 16:24:00	21	8
mpany Destruction Des	10	IMG_20170804_101328.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	21	8
Dual Inventive Pro	12	IMG_20170804_101357.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	21	8
Pround Pro- ex	4	IMG_20170804_101358.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	21	8
		IMG_20170804_101359.jpg	Jort Elst	Dual Inventive Proefbedrijf	2017-08-29 13:19:51	11	Ü

- If 'Document name' (table header) is selected, a downwards arrow ∇ will appear. This indicates the list has been alphabetically sorted in ascending order.
- If 'Document name' is selected a second time, an upwards arrow will appear. This indicates the list has been alphabetically sorted in descending order.
- If selected again, the list will go back to its original, unsorted state.
- This way of sorting applies to each of the categories you see in above image. This way of sorting can be found throughout MTinfo 3000.

MTinfo 3000 preparing & use of the ATWS 3000



5. ATWS 3000 EXAMPLE LAYOUTS

ATWS 3000 can be used in different scenarios with different setups. See the images below for example setups in which the ATWS 3000 can be used.



6. MTINFO 3000 USER ROLES

MTinfo 3000 utilises a role-based access control system. For security reasons we will only discuss the assignment of these roles with your Organisation's contact person directly. If you require more information, please contact your local Dual Inventive representative.

Explanation of User Roles in MTinfo 3000

These tasks are assigned per project and can be to any user within your organisation who holds the relevant rights.

User task	Explanation
Setup	The setup task consists of creating the project and assigning tasks to other users.
Design	Assigns detection units to the project.
Design verification	Verify the project design. Do not assign this task to a user in the project who is also responsible for the 'design'.
Design validation	Validate the project design. Do not assign this task to a user in the project who is also responsible for the 'design' or 'design verification'.
Planning	Assigns warning units to the project and selects users that can operate the ATWS 3000 project.
Planning verification	Verify the planned project. Do not assign this task to a user in the project who is also responsible for the 'planning'.
Planning validation	Validate the planned project. Do not assign this task to a user in the project who is also responsible for the 'planning' or 'planning verification'.
Project release	Release the project.
Project return	Return the project.

7. USING MTINFO 3000

This chapter explains the process of creating an MTinfo 3000 project. A project allows you to easily monitor and activate an ATWS 3000 set. In order to create a project in MTinfo 3000 you will need the required user roles.

Always ensure a secure connection to MTinfo 3000.

a. Logging in

- Go to <u>https://mtinfo3000.com/</u>.
- Enter your user name, company code and password
- Read the general terms & conditions and accept them
- Log in

Note, you will only be able to log in when you have had the appropriate user rights assigned. If you require more information, please contact your organisation's contact person.

b. Set up project

The steps below (1-3) are all part of the project setup.

The design and planning of a project consist of multiple stages which need to be completed in order to fill in the design and planning.

To set up a project, please follow these steps:

- Select 'Projects' from the MTinfo 3000 Dashboard
- Click on 🛨 to create a new MTinfo 3000 project

1. Project info

						Super Dave	٠.
tup project							
Huma > Projects > Project (c)							n),00
O	0	0	00				
Project Info	Users	Tasks					
Project name *	Project name]	Description	Description		-
Company	Doal eventive fast						
Reference	Referance]	Project for romaric	Projection contack		-
Туре"	RC	TWS	Regular		10000		
Protection Controllar	None	_	·				-
Safety Planner	None						

- Enter a project name
- If required, enter a reference (optional)
- Select 'TWS' as the project type
- Add a protection controller and safety planner (optional)
- Add a description and project log remark (optional)

Mandatory fields are marked with a red asterisk *. These must be filled in correctly in order to move on to the next stage.

Any not marked as mandatory do not need to be completed to continue onto the next stage.



2. Users

• Select the project's project users

Home > Projects >	Manual project 12-04 (3) Project Schup Felt		15.5
O Depart Info		00	
Filter	PROJECT USERS	SELECTED USERS	
Rame Optional		 Inspection August Noted Lander at Noted Lander at Noted Therma Noted Therma Noted Statemark 	
Najectroic Subury Baban	C Project Designer Project Leadur Project Leadur	 Trappet los de . Bager los r 	
C) terim C) terim C) Very beim C) Very beim	Project Planner Project Vandelor		
	 Project Verher Super Daar 		

3. Tasks

• Assign users to their project roles

Name	Setup	Design	Verify Design	S Validate Design	S Plan	Verify Planning	Validate Planning	S Release	🔛 Return
Project Designer		8							
Project Leader	8								
Project Operator								8	Ø
Project Planner									
Project Validator				2			8		
Project Verifier			2			2			
Super User	9	0	0			O	0		

You should never assign the same user all of the design/plan/verify/validate roles.

- Save the project by clicking 🕒.
- To cancel the project setup at any point, select 💌 Any entered data will NOT be saved.

To go back and change any entered data before saving the project, select the required stage and change the data accordingly.

c. Project design

Once the project is set up, the work area needs to be designed. The work area defines the location on the track in which the ATWS 3000 devices need to be installed. This plan helps guide the users and operators, making deployment easier and preventing mistakes.

Select the 'Design' tab and click on 下 to start designing the project.

Note, you can only access this button when you have had the appropriate user rights assigned. To cancel the design at any point, select **×**. Any entered data will NOT be saved.

MTinfo 3000 only saves the design when the user clicks 'Save'. Please save your design regularly to prevent loss of data.

The table below explains the different buttons you can use while designing your work area.

1	Select Select and move items. Click on the arrow, then click once on the item you want to move, it will now be circled by a dashed line. You can now drag the selected item to a new location.	
Û	Delete Delete the items. Click on the item you wish to delete, then click on the 'trashcan' to delete it.	
្រុះ	Zone This symbol allows you to mark your work area on the design. Double click to stop drawing the work area.	
km	Mileage Add the device position mileage to items in the work area.	
	Strike in Allows strike in devices to be placed on the design.	
	Strike out Allows strike out devices to be placed on the design.	

1. Drawing your work area

To ensure the ATWS 3000 devices are placed in the location near the track, a work area should be drawn. This is done as follows:

- Click on 'New design'
- Upload a work area design that you want to use for your project (we advise you to use a simple schematic overview that uses mileage). MTinfo 3000 accepts any image file format such as .png and .jpg. PDF files are not accepted.

An example of such a simple schematic overview is shown below. A scaling ratio can also be added to the design, if needed



• Proceed to mark the area in which the work will be performed, using the zone tool. This is done by selecting the zone symbol and then clicking on the starting point of the work area that you want to draw. After doing this you can mark the rest of your work area by clicking again. Each subsequent click places a corner of your work area. Your work area will be formed automatically while doing this. When finished, you can stop placing the zone tool by double clicking.

See the image below for an example of a completed work area



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7. CONTINUATION USING MTINFO 3000

- Next, mileage can be added to the work area as a reference for the installer. This is done by selecting the mileage tool and placing them on the left or right edge of the work area
- To complete the mileage reference, click the three dots above the indicator
- Place the strike in and strike out devices (which detect arriving and departing traffic) on the work area. Please abide your local rules and regulations to decide the distance at which the strike in- and strike out devices are placed in regards to the work area.

 When using multiple strike ins and a manual strike out, the strike out is to be placed inside

the work area. There should be a strike in device at all potential entry points to the work site and these are added to the design as per the above instructions.

 Next, assign all of the devices to a channel. This is done by right clicking on the device, or through the table on the right side of the screen The channels allow for multiple ATWS 3000 systems to be used within a single MTinfo 3000 Project.









• The designed work area will look as follows:

• Once completed, save the work area by pressing "ok" in the upper right of the screen The 'Validate' function checks that the minimum number of strike in and strike out devices have both been assigned to the project and assigned a channel

The project design can also be viewed and downloaded by the user on site via the MTinfo app. For more information, see the installation manual ATWS 3000.

2. Pick list

Once the design is complete, the next step is to assign specific devices (using their ID numbers) to the design. This is done in stage 2, the pick list.

• Assign device ID's to each strike in and strike out device on the design using the dropdown lists. **Note**, you can select a device once per project. Each device needs to be linked to a unique serial number.

3. Remarks – Optional

- Add a remark for the installer, operator and a safety remark (optional)
- Add a reference to be shown on the app to the installer and operator (operator)

4. On map – Optional

 To help the installer and operator with geolocation of the site, an overlay of the work area can be drawn onto a map. This is done by clicking on the zone tool and as seen in stage 1, drawing your work area



Attention, the work area you have drawn is to serve as an **indication** to the installer only. It **may** not be 100% accurate.



• Save the design so that it can be verified by clicking on 🐵 The following screen will appear:

Based on your assigned roles with	in the project, you are also allowed to perform the following
Possible actions	≪ Save
	* Submit for verification
Project log remark	Optional
Current status	Concept
The new status will be	

- You can save the design as a draft by choosing 'Save'. The design will be saved, but not submitted for verification
- By checking the 'Submit for verification' box, the design will be sent to the users allocated to the verification and validation roles. MTinfo 3000 utilises the six eyes planning principle to minimise risks. This means that each design should be checked by a minimum of 3 people (first creates the design, second verifies the design and the third validates it). More information can be found in chapter <u>7e. Validate and verify</u>
- The verification and validation stages can be skipped (if the user holds all of the verification and validation roles) as they will be able to select both the 'Verify' and 'Validate' boxes at this point also. However, Dual inventive does NOT recommend this in operational use

To change any entered data before saving the project, you can click on any of the previous stages and change the data accordingly.

d. Project planning

This section is used to assign the users to the project and also to set any limits on the times in which they are able to operate the project.

Click on the planning tab and then on 🕨 to start planning the project.

Note, you can only access this button when you have had the appropriate user rights assigned. To cancel the design at any point, select \times . Any entered data will NOT be saved.

MTinfo 3000 only saves the design when the user clicks 'Save'. Please save your design regularly to prevent loss of data.

1. Operators

The operators are responsible for the use of the devices assigned to the project. They are the people who will be using the ATWS 3000 as their protection on site.

								Super User	- 8
Plan p	roject								
	Home 2	Projects > Manual p	roject 12-04 > Pho	ject PG (minj) Edit					15
				Opticial	Optional	Optional	Optional		
	<u> </u>		2	3	0	5	6	00	
			-	-	-	-		00	
	Оре	erators	WU(M)s	Instruction App	Documents	Access Levels	Devices		
	PROJECT	OPERATORS					SELECTED OPERATORS		
5	PROJECT OF ERRIDING		0	horized and		Operation	SuperUser		
	O	App RS	de	ruisa perior		prive	App TWS		
		App TWS	1	2018-04-13 1	2018-04-23 1		2018-04-13 15947 - 2018-04-23 15947		
	0	Mark Dumen							
	D	Project Operator							
	9	Super User		Doptional	Dotional				

- Select the operator(s) who are going to use the project
- Select the operation period in which the operator is allowed to use the devices (optional)

2. WUM('s)

- Decide the type of warning signal of the WUM 3000's
 - Signal Wa 1 produces an acoustic signal for 3 seconds
 - Signal Wa 2 produces an acoustic signal for 3 seconds, pauses for 1 second and then sounds another 3 second acoustic signal

• Assign the WUM 3000's that will be used on the project. Multiple WUM 3000's can be assigned to a single project and a WUM 3000. A WUM 3000 can also be can be assigned to multiple released projects at once, although they can only be activated on one project at a time. The operator selects in the MTinfo 3000 app which of the assigned WUM 3000's will be used in the work area

Filter		WARN	ING SIGNA	L.				In a list	On a map
berial number	6			a i		Wa i		Transien Contraction	
Optional		WARN	ING UNITS					TSR.0001 (WUM.3005)	
WIM NOD	505		ID code.	Status	Туре	Seriel number	Device type	 328/0000 (M/0H/3000); 	
			358.0001	Active	WUM 2000	350.0001	WUM 2000		
			358.0003	Active	WUM 3000	358.0003	WUM 3000		
		0	358.0004	Active	WUM 3000	358,0004	WUM 3000		
			358.0005	Active	WUM 3000	358,0005	WUM 3000		
		0	0000/mia	Active	WUM 3000	sim0000	WUM 3000		
		0	sim0001	Active	WUM 3000	sim0001	WUM 3000		
		B	sim0002	Active	WUM 3000	sim0002	WUM 3000		
		0	8000/mill	Active	WUM 3000	000003	WUM 2000		
		D	sim0004	Active	WUM 3000	sim0004	WUM 3000		
		0	minister.	Artist	WEIM 2000	airc0005	WLM 3000		



3. Instruction app – Optional

Alongside the operators who use the project, users can be assigned to view the project through the app and download/upload project related documents and forms. This stage lets you select these regular users.

Filter	SELECT INSTRUCTION APP USERS	SELECTED USERS
,	- Name	Access User
Name	Access User	App TWS
Optional	App Administration	 Super vse
2	App Instructions	
	App Location	
	App Realtime	
	App RS	
	App Scan	
	 App TWS 	
	App Weid	
	Asset Administrator	

4. Documents – Optional

Operators can add documents to the project at this stage, where required. These documents can be items such as rules and regulations to be followed while performing specific maintenance tasks.

	Document name	Size	
Drop a file here, or	Screenshot_20180327-140249.jpg	0.2 MB	51
SELECT FILE			

5. Access levels – Optioneel

Users can fill in a feedback form once work on the track is completed. This stage allows the forms and the users to complete them to be added to the project. The access levels ensure that users are only able to access the documentation that they have permission to view.

HON ACCESS LEVEL	5			
larino	Level		Use document	Minimum required access level
pp 1W5	000	General Leadback temptates	Dible) smearche Creanol complete	TTTT
aper User	000		😅 Strukton Rail (SMB)	000
ocess Oser	000		(104M Infra Taol (UWII)	(3) (2) (0)
			G Accepteer documentatie	000
			Struktors stall city	***
		Logbook feedback templatas	Skistelijst	(1)(2)(1)
			Dowdracht sawel, waars	$\langle 1 \rangle \langle 2 \rangle \langle 1 \rangle$
			C Transferateiter	000
			🕝 Werkpekken	() 0 ()
			🗍 wanalidan	020
			() Speningstoosstellingen	(1) (2) (1)
			Volige barvidbaarbeid	$\langle 0 \rangle \langle 0 \rangle \langle 0 \rangle$
			C) Lost Minute Risk Analyse	(1)(2)(1)
			Wisselinukijsi	020
		Documenta	Screenstol, 20180327-140348.pg	0(2)(0)

6. Devices – Optional

Additional Dual Inventive products can be added to the project overview, to allow all assigned relevant devices to be visible in one project.

• Add any additional devices (such as a ZKL 3000 or CRTM 3000) to the project if required

Filter		DEVICES			In a list On	a map
	-	ID code	Status	Туре		
ID code		704.003	5 Active	CRTM 3000 - Gateway		
Optional		714.006	Active	CRTM 3000 - Temperature sensor	PROJECT DEVICES	
	/	714.007	Active	CRTM 3000 - Temperature sensor	 737.0024 (CRTM 3000 - Temperature 	e sensor)
Status	24	737,001	5 Active	CRTM 3000 - Temperature sensor		
_J ACTIVE 24	24	737.001	Active	CRTM 3000 - Temperature sensor		
Type	05	737.002	Active	CRTM 3000 - Temperature sensor		
CRIM 3000 - Gateway	1	737.002	Active	CRTM 3000 - Temperature sensor		
GreenHUB 3000	1	737.003	Active	CRTM 3000 - Temperature sensor		
		737.003	Active	CRTM 3000 - Temperature sensor		
		737.004	Active	CRTM 3000 - Temperature sensor		

- Save the project so that it can be verified, using
- The project can be saved as a draft by just selecting 'Save' 💿 . The planning will be saved, but not submitted for verification
- 'Submit for verification' will send the plan to authorised project users to verify and validate the planning. MTinfo 3000 utilises the six eyes planning principle to minimise risks. This means that each design should be checked by a minimum of 3 people (first creates the design, second verifies the design and the third validates it).

More information can be found in <u>chapter 7e. Validate and verify</u>

• The verification and validation stages can be skipped (if the user holds all of the verification and validation roles) as they will be able to select both the 'Verify' and 'Validate' boxes at this point also. However, Dual inventive does NOT recommend this in operational use

Project log

The project log shows the history of any tasks performed on the project. It displays what action has been taken, who by and when.

e. Validate and verify

The six eyes principle which underpins MTinfo 3000 requires a minimum of three people to check both the project design and the project planning before the project can be released. Once a project is sent for verification or validation, the relevant user will receive a notification to complete these tasks in the 'My MTinfo' section. When a user selects one of these notifications, they will be taken to the screen below:

-						A Management of All All All All All All All All All Al
View p	project					
	Home 3 Projects 3 Ho	multipolyce 12-04				3
	Setup	✓ Design	Planning Documents	Project log		
						Planning of grave through the same Planter
	PROJECT USERS					
	Name	Email address		Alarm nomber	Access level	Doc. accepted
	App TWS	besting galaxiewentive com		+31627151473	000	7
	Super User	testing@dualinventive.com		+31627151473	(1)(2)(2)	
	Access User	terang poul inventive, com		+31627151473	000	1
	OPERATOR RIGHT			WARNING UNITS		
	Operator name	Pariod of a	peration	Serial number	De	vice type
	App TWS	2018-04-1	15.47.00 - 2018-04-23 15.47.00	358.0001	W	RM 3000
	Super User	Always		358.0005		JM 3030
	DOCUMENTS			WARNING SIGNAL		
	Documents		Appens level	We It Is ecoustic signal.		
	Feedback templates					
	Structon Rell (LWD)		000	RECUESTED DEVICES		
	Accepteer documentatie		000	ALQUESTED DEVICES		
	Strukton Red LUV		(2) (3)	Serial number	Device type	
	Logbook feedback templates			237.0024	CRTM 3000 Temperature	t denade
	Overdiracht seint, marte		0.00			

• Click on < to either approve or reject the validation or verification. You can leave a note for the designer/planner in the remark field, if required.

f. Edit project

A project can be edited by navigating to the project setup and clicking on 🕗 . Edit the project as required, and save it again using the 😑 button.

Note, you can only edit a project if it has not been released. To edit a released project, it will first need to be returned (see <u>chapter 8b. Return</u>).

8. RELEASING, RETURNING AND CLOSING A PROJECT

Once a project has been set up, designed and planned, it must be released for use. Releasing a project locks the specified devices onto that project so that they cannot be used elsewhere until it has been returned again. Devices can still be added to other projects, but that project cannot be released before the current project has been returned.

a.Release

To release a project, please follow the steps outlined below:

• Starting from the project setup screen, select 'Release'. The following screen will be displayed:

Release - Manual project 12-04	
✓ Planning	
✓ Design	
Device availability	
Povice battery status	
? Request release	
Project released	
? Inform users	

MTinfo 3000 performs these checks before releasing the project. Once each check is successfully completed, a green tick will appear next to it. Once all checks are completed successfully, the project is released and the users can now activate and use the assigned equipment as setup.

In the event that the release of the project is not successful, MTinfo 3000 will notify the user of the error that has occurred.

Explanation checks

Planning \rightarrow Checking project planning, see <u>chapter 7d. Project planning</u> Design \rightarrow Checking project design, see <u>chapter 7c. Project design</u> Device availability \rightarrow Checking device availability Device battery status \rightarrow Check batteries, see Installation manual ATWS Request release \rightarrow Preparing release of the project Project released \rightarrow Releasing the project Inform users \rightarrow Notify users that project has been released

In case a check is not completed successfully, a red cross will appear in front of the specific problem area with its cause. Once the issue in question has been resolved, the project can be released again.



8. CONTINUATION RELEASING, RETURNING AND CLOSING A PROJECT

b. Return

• To return a project, navigate to the specific project's setup page. The 'Release' button will have been replaced with a 'Return' button

Note, after returning the project, users cannot activate the specific devices anymore.

• Upon clicking 'Return', MTinfo 3000 will perform the checks required to allow the safe return of that project. Once each check successfully completed, a green tick will appear next to it. Once all checks are completed successfully, the project will be returned and the users can no longer operate the equipment.

In the event that the release of the project is not successful, MTinfo 3000 will notify the user of the error that has occurred.

Return - TWS 2018	1	
 Request return 		
 Project returned 		
C Inform users		

c. Close

Once a project has been completed and there are no plans to re-release it, it is best practice to close it, which will remove it from the list of available projects. To permanently close the project, follow the steps below:

Warning, closing a project is irreversible.

- Select the project you wish to close
- In the project's setup, click on
- The message below will pop up

Confirm	Î.	
Are you su	ire you want to c	close this project?

• Select 'Ok' to permanently close the project

9. ADDITIONAL FUNCTIONALITIES

Within MTinfo 3000, devices and projects can be easily monitored. For extra insight, labels and/or remarks can also be added to individual devices. This chapter explains how to use these functions.

a. Realtime status

Project devices can be monitored in realtime through MTinfo 3000. This is done as follows:

- From the main menu, navigate to 'Real Time Status'
- Select the devices you want to monitor in real time
- On the map, select the device you want to view. The following window will appear

Serialnumber	tstduu001	2
Device type	DUU 3000	
GPS position	51.58594512939453, 5.195329666137695	
Device status	Online	
Last update	2018-08-24 10 23 33	
Battery 1 status	Full	
Battery 1 voltage	12.71V	

Status	Explanation
Serial number	The serial number of the selected device.
Device type	The type of the device that is being displayed.
GPS position	The GPS position of the selected device.
Device status: Safe/unsafe/offline/standby	Offline = device is turned off or has no connection Standby = online, but not assigned to an activated project Safe = Online, assigned to an activated project Unsafe = online, assigned to an activated project but shows an error
Last update	The last date and time when the device communicated with MTinfo 3000.
Battery status:	The battery of the selected device has full power.
Battery status:	The battery of the selected device has adequate power.
Battery status:	The battery of the selected device is low.
Battery status:	The battery of the selected device is almost empty.
Battery status:	The battery of the selected device is empty.
Battery status:	The battery of the selected device has been removed or is completely empty.
Battery voltage	Shows the voltage of the selected device's battery.

For additional explanations, please consult the installation manual ATWS 3000, chapter 'Troubleshooting'.



9. CONTINUATION ADDITIONAL FUNCTIONALITIES

b. Adding data to devices

A remark and/or label can be added to any device, to help identify it. To do this, please follow the steps below:

- Navigate to 'Asset management' and 'Devices'
- Select the devices to be edited
- Click on 💉 to edit the device
- Enter a label by filling in the field next to 'Owner label' or add a remark
- Click on
 to save the changes

c. Project documents

Project documentation can be downloaded by clicking on 📥 within the project. From here, users can download the project data, archive, document acceptance or the picklist.

Warning, downloading the project archive might take a while.

All the project documentation can be viewed online by clicking on the 'Documents' tab.

These five types of documents; feedback, logbook, uploads, sign in lists and workorders are added through the MTinfo 3000 app (see the MTinfo 3000 app manual for more information). Specific documents can be downloaded by clicking on \measuredangle .

10. NOTIFICATIONS

Users can opt-in to receive service alerts via e-mail. These alerts are sent to the e-mail address which has been linked to their MTinfo 3000 account. Users will receive an alert for all roles that they are assigned to. These actions are comparable to the ones shown in My MTinfo.

Notifications can be turned off by going to 'My profile', which is found by clicking the logged in users name in the top right corner.

Jort Elst Dual Inventive Proefbedrijf My MT My profile My company Privacy statement Contact us Logout

11. SERVICE AND REPAIRS

Please contact Dual Inventive for service and repairs. The service date of the devices can be found on the 'Delivery Report' or whilst assigning devices to a project in <u>stage 2 of the project design</u>, <u>Picklist</u>.

CONCLUSION

If you encounter any problems when using the ATWS 3000 or are unsure of anything in this manual, please report this to us via <u>info@dualinventive.com</u>, or by phone.

Ultimately, customer satisfaction and your safety are our top priority and therefore we take all feedback very seriously. We use this to improve the safety and design of our products. On behalf of the Dual Inventive team, we wish you all the best.

Ti Duallnventive Ubiquitous Rail

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