# TRANSLUTION

## ADVANCED SCANNING FEATURES

### INTRODUCTION

This white paper is intended to give a detailed overview of the wide range of features supported by the TransLution scanning functionality. There is also an attempt to give some examples of how each of the features will be used on a given site to allow operators and end users to receive the full benefit of the flexibility and power of the TransLution scanning functionality.

### CONFIGURABLE PROMPT TEXT

Scanning in TransLution can be configured in a number of different ways to deliver great power and flexibility to users. One of the first and simplest things that can be configured is the actual prompt text. This means that if the user is required to scan the product barcode, he could be presented with a prompt that says anything from: 'Please scan stock code' to 'Scan item barcode now' to 'Enter product code'. This allows the system to be configured to use terminology that is familiar to the user and the same as what is generally used on site.

### CONFIGURABLE PROMPT SEQUENCE

There are many different things the user can be required to do with a scanner. For example the scanner can be used to move products around the warehouse, receive product, pick products for sales orders or count product either for a cycle count or a stock take. Many of these would require a slightly different sequence of scanner prompts but the benefit that TransLution offers is that depending on your site requirements you can set up each scanning function to have a specific sequence of prompts that best suits your requirements.

For example, when doing a stock take, you can automatically return the user to location prompt to scan a new location if there is only one product per location. If however, you have multiple products per location, you can configure the software so that the user scans a location once and can then scan multiple products without having to scan the location again. Then, when they are finished with all the products in the location, they can skip to scan the next location. The same thing can be done when moving products. The configuration can be such that the number of scans can be minimised depending on whether the general rule is that one product is moved from one location to another or that products are moved from multiple sources to one target or from one target to multiple sources.

### MULTIPLE SCANNER PROMPT SEQUENCES

It is also possible to define any number of prompt sequences for a specific function e.g. to move product (called Product Transfer). The benefit of having different scanner prompt sequences is that the text labels can be different or the actual prompt sequence as described above can change depending on whether product is being moved between two warehouse locations or moved to a dispatch area or even different types of custom validation can be done.

# ADVANCED SCANNING FEATURES

## STANDARD VALIDATION

The system, as expected, supports different types of standard validation, all of which can be turned on or off as required. The most common types of standard validation are to confirm that the scanned barcode is in fact a valid location barcode or a valid product barcode as the case may be. Another standard validation that is generally used and not disabled except in very specific cases is validation that the product scanned and the qty entered to be moved does actually exist in the location scanned. This prevents locations going negative in the system.

## NON STANDARD PROMPTS

It is possible to add a prompt into a scanner prompt sequence to record additional information. For example if we are scanning product onto a truck, you may want to record the truck registration or the driver name. Another frequent use for the non-standard prompts is to scan a document or reference number that can be stored along with the rest of the transaction.

## NON PROCESSED PROMPT SEQUENCES

As an extension of non-standard prompts, it is possible to have non-processed prompt sequences. If a scanner prompt sequence is set up to be a non standard prompt sequence then there is no effort made by TransLution to do the normal processing of moving product or counting product, it simply does the scanning validation that is required and then records the scanned data. Under these circumstances of course no validation may be required.

A good example of the use of non-standard prompt sequences relates to work flow. There are often times when people want to track a document through a process flow, even in an environment where there is no product scanning. There can then be scanner prompt sequences defined for each step in the process for example say there is a manual picking and checking process. The user will scan the Pick Slip to say "Picking Started" and again to say "Picking Complete". There could be additional prompts to say "Packing Started" and "Packing Complete" and "Truck loading started" and "Truck loading complete".

The features described above allow the scanner prompts to be defined and managed but they do not allow the system to configured to, for example, check that the Picking has started before it can be completed. For that we have to use the custom scanning validation.

## CUSTOM SCANNING VALIDATION

One of the greatest strengths of TransLution is the ability to do custom validation against scanned information. The software allows the scanned data to be passed to a stored procedure along with the scanner job ID and then any kind of validation can be done which either results in a pass and the scanner going on to the next prompt or a fail and the scanner displaying any required error message and returning to the same prompt.

An example of how this validation can be used fits perfectly into the scenario described above. We have a series of non processed prompt sequences allowing the user to scan that they have, for example, started building a load onto a truck. We want to be sure that they cannot say that the load is finished until it has at least been started. We also want to record the information such as the start time and date, the scanner user, perhaps sales order numbers etc, into the database. The custom validation feature allows us to do any of the data validation and logging described above.

## SUGGESTION PROMPTS

While the custom validation logic uses the scanned data and validates it before moving onto the next prompt, the suggestion prompt takes the scanned data from any previous prompts and uses it to display a message on the scanner screen in the standard scanner form and not as an error message. This feature is often used as a handy validation tool – the user scans a product barcode and the system displays the product description on the screen when the user is prompted to enter the quantity he is moving.

## DEFAULT VALUES

Default values are used when the (most commonly) target location for a scanner function, such as transfer to dispatch is always the same. In this case, why make the user scan the location if it can be defaulted and a scan (and possible error) can be eliminated. This is particularly useful when goods are being moved to a dispatch area which does not always have a barcode that is conveniently located for scanning.

## LOCATION MAPPING

Even though the standard validation allows you to ensure that the barcode scanned as a location barcode is a location it may be that a whole group of locations are not allowed for a specific scanner function. Rather than excluding these locations via custom validation, the software allows users to allocate (or map) locations to a specific scanner function. When doing the scanning for that function and you scan a location, even if it is a valid and active location, if it is not mapped to the scanner function you will not be allowed to scan it. In order to keep configuration simple, there is a one click option that allows you to map all locations to a specific scanner function.

## SCAN CONFIRMATION

The latest feature added to the TransLution scanning functionality is an "Are You Sure" option. The user can use the custom scanning validation feature, in addition to or instead of doing more complex custom validation, it can be used simply to return a message box with an 'Are You Sure?' message. If the user clicks 'Yes' the scanned data is accepted and TransLution moves on to the next prompt. If the user clicks 'No' then the scanned data is not accepted and TransLution returns to the same prompt. This can be done on any or all prompts depending on when the management feels the user needs to confirm the scanned data. This can be dependent on some additional validation being done first. When, for example, entering numeric data during a cycle count, the Are You Sure message can only be displayed when the entered value differs from the expected value by more than 10%.

## SCANNER PERMISSIONS

It is possible to configure scanner permissions so that only certain Users (or user groups) can have access to a given job or set of jobs on a specific scanner.

## SCANNER CONFIGURATION

There is some validation done directly on the scanner before going to the TransLution database to validate scans. This helps to speed up scanning in an RF environment but is the main line of defence when using scanners in a batch mode. Unless a scanner job is fully directed telling the user what to scan and in what sequence, there is a great latitude when scanning. The basic scanner level validation does things like validate the length of the product and location barcodes and validate the maximum quantity allowed. This means that if all product barcodes are 13 char long (as in EAN 13 retail barcodes) then before TransLution even goes to do product level validation against the database, it will first check the barcode length and if the scanned barcode is not the right length the scan will fail. This first pass of validation speeds up the validation process and if the user is running in batch mode may be the only validation they have.

## RF vs. Batch Scanning

TransLution works with both RF and Batch scanning modes. With Batch scanning, the scanner job is downloaded to the scanner while it is connected to the PC and then when the user is done with scanning, they upload the scanned data to TransLution where it is validated and processed. While this mechanism does allow for some cost savings since there is no need to install a radio network on site, there are significant downsides as well. None of the additional validation processes described above can be used since they need the scanned data to be validated as it is scanned. Also, there is no way to do any real time processing and updating of bin levels as data is scanned since we do not know when the scan occurred. This functionality, while supported is not recommended. An extension to this functionality is that TransLution can be configured so that if it is being used in RF mode and the RF network fails, it will automatically run in batch mode and store the scanned data on the scanner. As soon as the network connection is re-established, the scanned data will be uploaded to TransLution automatically. This process is invisible to the user.

This feature is very useful in an environment where there is a 'dead spot' in the network that does not justify the addition of a new access point but may occasionally have a user scanning in that area. However, if the stored procedure validation is being used then this feature should not be enabled since no scans done while the scanner is not on the network will be validated.

## Conclusion

The intention of this document is to allow users to understand how to make the most of the benefits and flexibility offered by TransLution when implementing scanning. The detailed case studies we have developed help to illustrate with some specific examples how our customers have taken advantage of the features of the TransLution scanning software.

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