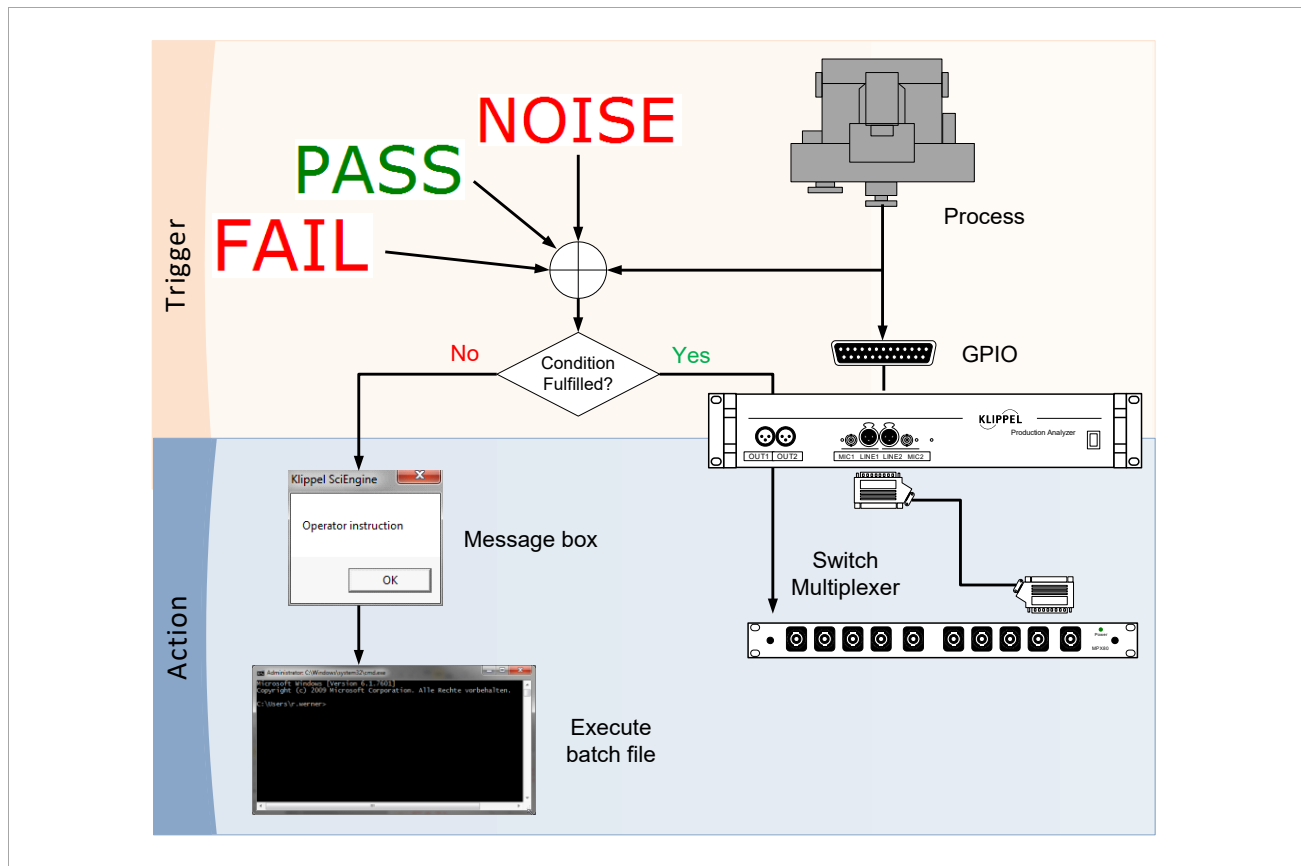


FEATURES	BENEFITS
<ul style="list-style-type: none"> • Reacts to defined conditions checked during test sequence • Executes actions in an automated environment • Provides information to operators • Checks temperature and humidity • Executes batch files 	<ul style="list-style-type: none"> • Interaction with automated test environment • Control automation devices • React to external trigger conditions • Additional information for operators • Control multiplexers • Keep test within required environmental conditions



The IO & Prompt is a complementary task of the KLIPPEL QC software designed for the conditional interaction with an automated environment and the QC operator during a test sequence.

APPLICATIONS:

- Automated environment
- Complex conditional test sequences
- Climate control

CONTENT:

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1 Overview

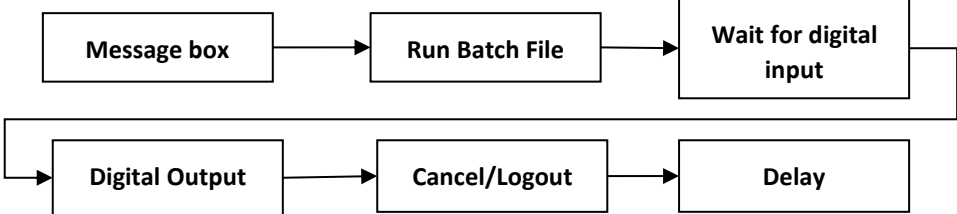
Summary	The IO & Prompt Task provides a set of conditions and subsequent actions to be triggered. The conditions may be test verdicts of preceding tasks or certain states of the systems inputs (GPIO). Different actions may be performed dependent of the state such as batch file execution, GPIO switching or operator interaction using message boxes.
Principle	A selection of different state conditions can be used as triggers for dependent actions that are executed if a condition is fulfilled or negated actions if a condition is not fulfilled.

2 Requirements

Software	QC Basic, Standard or Stand-alone software
Hardware	KLIPPEL Analyzer 3 or Production Analyzer (only required for GPIO control) Temperature/Humidity Sensor (optional)

3 Test Setup

Conditions	<p>Available conditions are:</p> <ul style="list-style-type: none"> • Digital input • All tests passed • Last test passed • Noise corrupted • Always <p>All conditions are disjoint ("or").</p> <p>Digital input: If this condition is checked an input field is shown, where the bit mask of the digital input state condition must be defined. The condition is fulfilled if the bit mask equals the digital input when the task is executed.</p> <p>All DUTs passed: If all tests in the preceding task sequence have passed, the condition is complied. Note: limits must be available to take any action.</p> <p>Last DUT passed: If any DUT has failed until the script is executed, the condition is complied. Note: limits must be available to take any action.</p> <p>Noise corrupted: The condition is fulfilled, if any of the preceding tests was corrupted by ambient noise.</p> <p>Always: In any case the action is performed.</p>
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<p>Actions</p>	<p>Actions are triggered according to the defined conditions. Independent actions may be defined if the condition is fulfilled (Action) or not fulfilled (Negated Action).</p> <p>The figure below shows the sequence of available actions, each action is independent. If cancel is executed, the task is canceled without execution of the following tasks.</p>  <pre> graph LR A[Message box] --> B[Run Batch File] B --> C[Wait for digital input] C --> D[Digital Output] D --> E[Cancel/Logout] E --> F[Delay] C --> D </pre> <p>Message box: A popup window to display a message.</p> <p>Run batch file: The specified .bat file is executed.</p> <p>Wait for digital input: Wait until the digital input signal equals a defined bit mask.</p> <p>Digital output: Set the digital output</p> <p>Cancel: Cancel all test execution immediately. All test verdicts collected up to this point will be displayed.</p> <p>Logout: Cancel all test execution immediately and log out of the current test sequence. No test verdict is shown.</p> <p>Wait: Wait a defined time before continuing.</p>
<p>Temperature and Humidity Check</p>	<p>A user-defined range of environmental conditions can be checked during a test session. The accessory <i>Temperature + Humidity Sensor</i> (Art. Nr. 2800-001 or 2800-011) is required.</p> <p>Limits can be defined as either upper or lower limit or as a range. The severity in case of violated range can be defined as Warning or FAIL.</p> <p>The test execution can be entirely blocked (optionally) if no temperature and humidity sensor is connected.</p>

Find explanations for symbols at:

<http://www.klippel.de/know-how/literature.html>

Last updated: September 25, 2019

