


Appendix 4 - Simulation cheat-sheet

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! When interacting with the blockchain, always make sure that you are logged into MetaMask, and that it's running and set to your unique account on the Ropsten TestNet. Wallet url: <https://wallet.ethereum.org>

! You must make sure you use the correct contract functions with the correct input information at all times - else you may have to begin again. Ask in the whatsapp group if unsure.

Read From Contract process position codes



AA	Design and contract awaiting approval
DA	Design and contract have been approved
FA	Quality of first-off has been approved
FR	Quality of first-off has been rejected
MA	Quality of main batch has been approved
MR	Quality of main batch has been rejected

Write To Contract functions

Input Customer Data	- only used pre-simulation
Input Supplier data	- only used pre-simulation
Customer Approval	- only used by the customer
Supplier Approval	- only used by suppliers
Input First Off Quality	- only used by inspector
Input Main Batch Quality	- only used by inspector
Send Supplier Payment	- only used by contract

Simulation steps

1. The **customer sends 12 ether** to each of the three contracts. This is done by clicking *Send* in the top left of the wallet, **not** via the contracts' *Send Supplier Payment* function.
2. The **customer and suppliers approve the production contract and design**. The customer uses the *Customer Approval* function (on each contract) and the suppliers the *Supplier Approval* function.

Insert a capital **A** in the *customer/supplier agree flag* field.
Insert the **SHA1** hash of the production contract ([Appendix 3](#)) in the *contract hash* field.
Insert the **SHA1** hash of the design ([wristband.stl](#)) in the *design hash* field.

Use <http://onlinemd5.com> to obtain the **SHA1** hashes. !Do not use another hash (checksum) type.

(To commit a contract function, press EXECUTE and then SUBMIT on the MetaMask pop-up. The process position flag will take a few minutes to update, after mining has taken place.)
3. Once both the supplier and customer have approved the design and production contract, the smart contract will automatically send an upfront payment of 1.2 Ether (10%) to the supplier. The process position flag will also change to **DA**. Note that the wallets do not show incoming transactions - though suppliers will see their balance rise and the contract's balance will decrease.
4. Each supplier prints one wristband and sends it to the quality controller (Bryn).
5. The quality inspector assesses the quality against the Acceptable Quality Levels described in the production contract (Appendix 3). The first off must be perfect.

6. The quality inspector uses the *Input First Off Quality* function with a capital **A** or **R** to signal acceptance or rejection.
7. Once a capital **A** has been input, the smart contract will automatically send the pre-batch payment of 4.8 Ether (40%) to the supplier. The process position flag will change to *FA* (First off approved).
8. The supplier prints the remainder of the order (5 pieces) and sends them to the quality inspector.

The quality inspector uses the *Input Main Batch Quality* function with a capital **A** or **R** to signal acceptance or rejection. Note the major and minor fault descriptions in the production contract.

Once a capital **A** has been input, the smart contract will automatically send the final payment of 6.0 Ether (50%) to the supplier. The position flag will change to *MA* (Main batch approved).

Any questions? See the simulation [guidebook](#) or ask in the whatsapp group.
