CLAIMS:

1. A computer-implemented control method comprising the steps of:
   providing a locking script in a first blockchain transaction, the locking script comprising at least one instruction arranged to process at least one Boolean input;
   providing a further blockchain transaction having an unlocking script;
   processing at least one input signal to provide at least one Boolean input;
   using the at least one Boolean input to execute the locking and unlocking scripts of the first and further blockchain transactions, wherein the method further comprises monitoring or searching the blockchain or blockchain network to determine the presence or absence of the further transaction and providing a computing resource arranged to influence the behaviour of a device or process based upon detection of the further transaction within the blockchain or blockchain network.

2. A method according to claim 1 wherein the step of processing of the at least one input signal to provide the at least one Boolean input is performed:
   i) by the unlocking script of the further blockchain transaction; or
   ii) by at least one computing resource or agent.

3. A method according to claim 1 or 2 and comprising the step of:
   transmitting the further transaction and/or first transaction to a blockchain network for validation.

4. A method according to any preceding claim and wherein the computing resource is arranged to influence the behaviour of the device or process based upon the validity of the further transaction.

5. A method according to any preceding claim and comprising the steps of:
   Interpreting the detecting of the further transaction within the blockchain or blockchain network as the TRUE output of a logic gate.

6. A method according to any preceding claim wherein validation of the further transaction within a blockchain network is dependent upon the execution of the unlocking script.

7. A method according to any preceding claim and comprising the step of:
controlling a device or process based upon the validity of the further transaction, wherein the validity is determined or established by a computer-based control agent, or by monitoring the blockchain network to determine if it has been validated by a network node, and/or by monitoring the state of the blockchain to determine whether the transaction has been written to the blockchain.

8. A method according to any preceding claim wherein the at least one instruction in the locking script is arranged to implement the truth table of a logic gate.

9. A method according to claim 8 wherein the gate is an OR gate, XOR gate, NAND gate, NOR gate, an NOT gate, an XNOR gate, an IMPLY gate, a Converse implication gate.

10. A method according to claim 8 wherein the logic gate is an AND gate.

11. A method according to any preceding claim wherein the at least one input comprises a numeric value, a constant value, a result of a hash function, a cryptographic key, a blockchain puzzle.

12. A method according to any preceding claim wherein the first and/or further transaction is generated and/or transmitted to a blockchain network by an automated process executing on a computing-based resource.

13. A method according to any preceding claim wherein the at least one instruction:
comprises a Boolean condition or operator; and/or
is written and/or executed using a stack-based programming language.

14. A computer implemented system arranged to implement the method of any preceding claim.

15. A control system incorporating a Boolean calculation or operation implemented on or using a blockchain, the Boolean calculation or operation comprising:
a blockchain transaction comprising:
at least one input; and

at least one instruction selected so as to implement the functionality of a Boolean truth table by processing the at least one input to provide at least one Boolean output wherein the system is further configured to monitor or search the blockchain or blockchain network to determine the presence or absence of the further transaction and provide a computing resource arranged to influence the behaviour of a device or process based upon: detection of the further transaction within the blockchain or blockchain network.

16. A control system according to claim 15 wherein the truth table is the truth table for an OR gate, XOR gate, NAND gate, NOR gate, a NOT gate, IMPLY, NOT IMPLY or XNOR gate.

17. A control system according to claim 16 wherein the truth table is the truth table for an AND gate.

18. A control system according to claims 15 to 17 wherein:
the output is a Boolean value; or
the at least one instruction is provided within a script associated with the transaction, preferably wherein the script is a locking script.