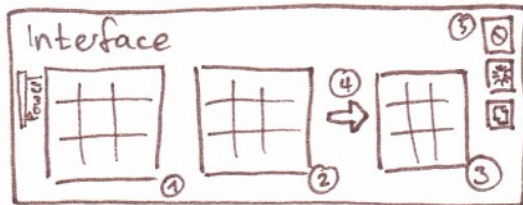# Ender IO Processing: Design Document

Batch Processor [Machine]

① Pattern Area (including count)

② Input Area (restricted to pattern)

③ Output Area

④ Progress (Takes power, duration: instant)

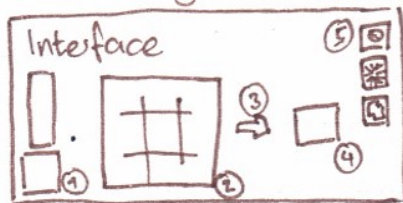⑤ Configuration: Redstone, IO, Buffering

Recipe:

1x Chest
1x Machine Cassis
1x Basic Capacitor
6x Iron Ingot

The Batch Processor gathers items together for little power.
Once all items specified ~~items~~ in the pattern are present in the input area,
they are moved to the output area (instantly) (if it is empty)

Processing Crafter [Machine]

① Power & Upgrade (25kiRF / Craft)

② Input Area

③ Progress (0.5s / 0.2s / 0.1s)

④ Output Area

⑤ Configuration: Redstone, IO, Buffering

Recipe:

1x Crafting Table
1x Machine Cassis
1x Franked Zombie
2x Octadic Capacitor
4x Dark Steel

Similar to AE2: Assembly Chamber. Late-Game Machine used for auto-crafting
(see processing upgrade for item conduit). Once the input area
is a valid crafting recipe the output is constructed after some
processing time (inputs are consumed at completion!).
Special interaction with Processing Plans in adjacent Item Conduits:
allows crafting Recipes to be processed!

Processing Controller [Machine]

Interface
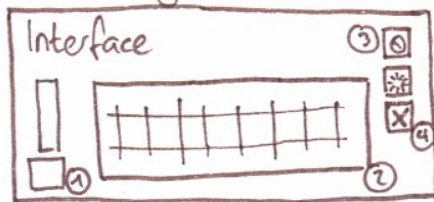
① Power & Upgrade
② Stored and Scheduled Items (scrollable)
③ Configuration: Redstone, IO
④ Cancel Button

Recipe

1x Professor Ghasty
1x Machine Cassis
1x Octactic Capacitor
2x Z-Logic Controller
4x Dark Steel

Similar to AE2: Crafting CPU. Can execute a processing order (java-object, see below) with 5 steps:

1) Gather all initial items from the remote access network and store them in ~.

2) Whenever all ingredients of a processing plan are available, push them into the corresponding machine.

3) Expect the outputs of the processing plan to be piped into ~.

4) Repeat steps 2 and 3 until the final result is available.

5) Put all stored items into the output slots (mark them as output)

For this to work an item-conduit must be configured to insert on highest priority and extract automatically, both on the inventory-network.
The GUI will display all nodes of the order including counts for stored items and to-process items. The cancel button also sets all inventory slots to output and frees ~ up to accept the next order.
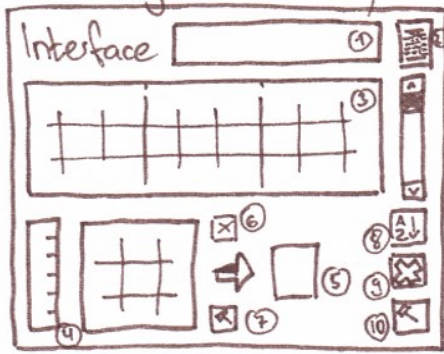
Item Conduit Connector with Processing Upgrade [Conduit]

Interface ◁ Extract ▷
Extract
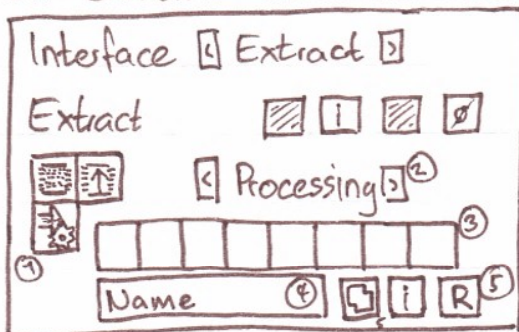
◁ Processing ▷ ②

Name

① Processing Upgrade
② Switch to display Processing/Filters
③ Processing Plan Slots
④ Name of ~~the~~ connected Machine
⑤ · Stacking Mode (Blocking/NonBlocking)
   · Emit redstone pulse at start
   · Reset current crafting (for Blocking)

2

Processing Inventory Panel [Machine]

Interface

① Search Filter
② Filter   ③ Inventory Storage (scrollable)
④ Nutrient Tank ⑤ Crafting Area
⑥ Clear crafting area
⑦ Order missing items for recipe
    ↳ When pressed changes to "fill recipe"
⑧ Sort order ⑨ NEI - Sync
⑩ Show current Processing orders (maybe seperate machine?)

Recipe

1x Management Core
1x Inventory Panel
1x Processing Upgrade
2x Ender Crystal
4x Vibrant Alloy Gear

Upgrade of Inventory Panel, similar to AE2: ME Crafting Terminal.
Allows issueing Processing Orders (java-object, see below) by clicking a
processing order displayed in ~~this~~ ③ and then choosing an amount
(dialogue pictured below). Items can be returned into the system/network
by shift-clicking from the inventory or dropping them in ③. Returned
items are pushed into the network, if an item gets stuck, display
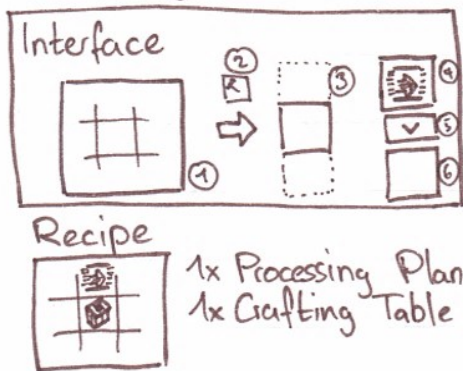an error (probably where ⑩ is).

Processing Order [java-object]

Interface
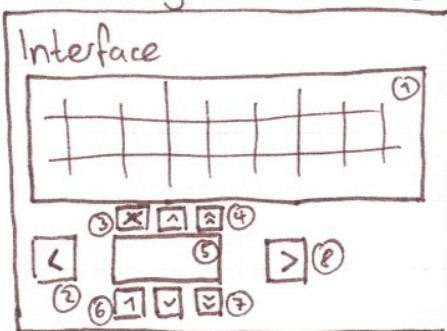
① Processing order display (according to amount)
② Back Button
③ Max Button (displays max on button)
④ Increase by 1 and ×2 buttons
⑤ Amount display (starts @ 16)
⑥ One Button (sets amount to 1)
⑦ Decrease by 1 and ÷2 buttons
⑧ Issue Processing order

A processing order is a directed, acyclic graph where nodes
represent items/processing plans and edges are the "ingredient" relation.
Each node has four counters (initially "ia" available, sheduled, processing, stored)
"sh", "pr", "st"
and a state ∈ {ready, processing (pr>0), finished (sh=pr=0), missing}.
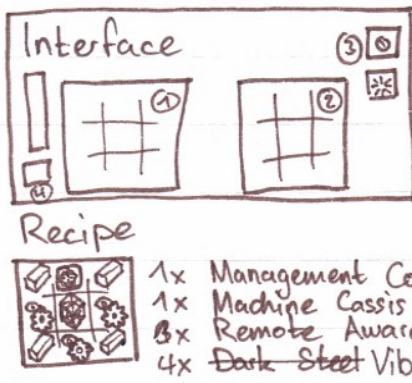white   yellow   green   red

3

Processing Plan Table [Machine]

Interface

① Pattern Grid
② Switch between crafting/processing
③ Extra outputs for processing
④ Empty processing ~~patterns~~ plans
⑤ Imprint button
⑥ Processing ~~pattern~~ Plan output

Recipe

1x Processing Plan
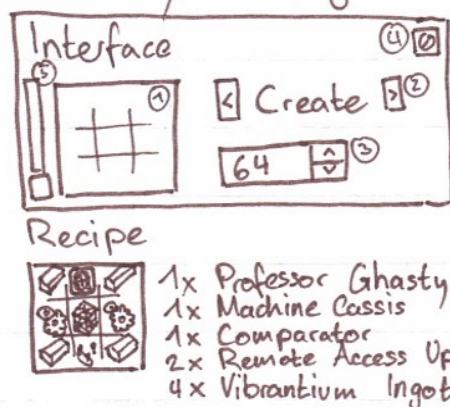1x Crafting Table

Allows configurating Processing Plans.

Remote Retriever [Machine]

Interface

① Pattern (including count)
② Output area
③ Configuration: Redstone, 10
④ Power & Upgrade

Recipe

1x Management Core
1x Machine Cassis
~~3~~ x Remote Awareness Upgrade
4x ~~Dark Steel~~ Vibrant Alloy

Can retrieve items from remote storage (as specified in ①).

Inventory Manager [Machine]

Interface

Create
64

① Pattern
② Mode Switch: Create / Delete
③ Amount/Limit setter, stepsize: 64
④ Configuration: Redstone
⑤ Power & Upgrade

Recipe

1x Professor Ghasty
1x Machine Cassis
1x Comparator
2x Remote Access Upgrade
4x Vibrantium Ingot

Machine that can manage the amount of specified items in storage network:

• Create: ~ automatically creates processing orders if any item has less than specified

• Delete: voids items from storage, if there are more than specified.

Processing Connector [Machine]

Recipe

1x Z-Logic Controller
1x Machine Cassis
3x Octactic Capacitor
4x Dark Steel

(No Interface)

(Multiblock) (Uses Power)

Distributes Processing to multiple *of the same* machines that are under ~.

Allows connection from several Item Conduits with Processing Upgrades.

Item Filter Block [Machine]

Interface

① Pattern (allowed Items)

② Input/Output Slot

③ Configuration: Redstone,/ 10, Buffering
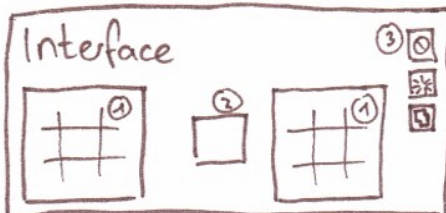
Recipe

1x Machine Cassis
4x Item Filter
4x Steel (Dark)

Allows only specified items in the storage slot. ②.

Stack Extractor [Machine]

Recipe

(No Interface, oriented, uses Power)

1x Item Conduit
1x Machine Cassis
1x Vibrant Crystal
2x Octactic Capacitor
4x Vibrant Alloy

Extracts 4 stacks at a time and pushes them on.

Notes

- Processing Monitor [Machine] / Machine Monitor [Machine]

- Wireless Terminal [Item]: Favorite items page

- Processing Controller: Fail after 80 sec. of processing?

- AE2: Drive Adapter?

- Hexactid Capacitor (Management Core + Octactic Capacitor)
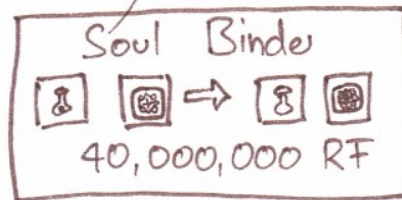
Management Core [Item]

Recipe:

Slice'N'Splice
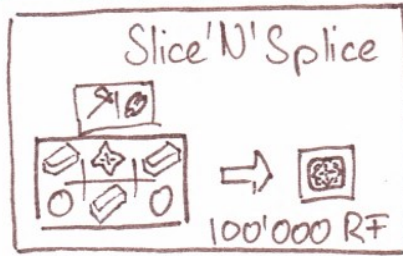
1x Nether Star
1x Enderium Ingot
2x Vibrantium Ingot
2x Silicon

100'000 RF

Lategame crafting item.

Professor Ghasty [Item]
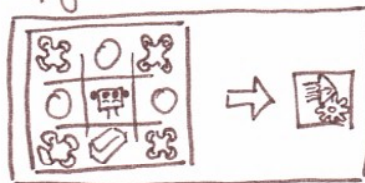
Recipe:

Soul Binder

1x Soul Vial (Ghast)
1x Management Core
100 Levels

40,000,000 RF

Late game crafting item.
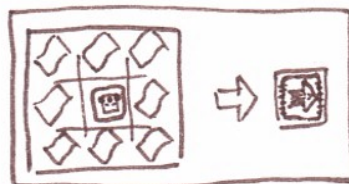

Processing Upgrade [Item]

Recipe:

1x Sentient Ender
1x Enderium Ingot
4x Conduit Binder
3x Silicon

Upgrade for Item Conduit Connector (uses same slot as Remote Awareness Upgrade). Unlocks 8 Processing Plan Slots (same location as item filter)

Processing Plan [Item]

Recipe:

1x Z-Logic Controller
8x Paper

Similar to AE2: Blank Pattern. Can be configured in the Processing Configuration Table to be either a processing or crafting plan. Once configured it can be put into a Processing Plan slot of an Item Conduit. and the recipe is enabled on the network's controller. When the crafting command comes, the input items are pushed into the adjacent inventory.