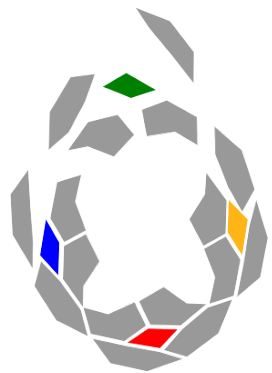


from computing to interaction

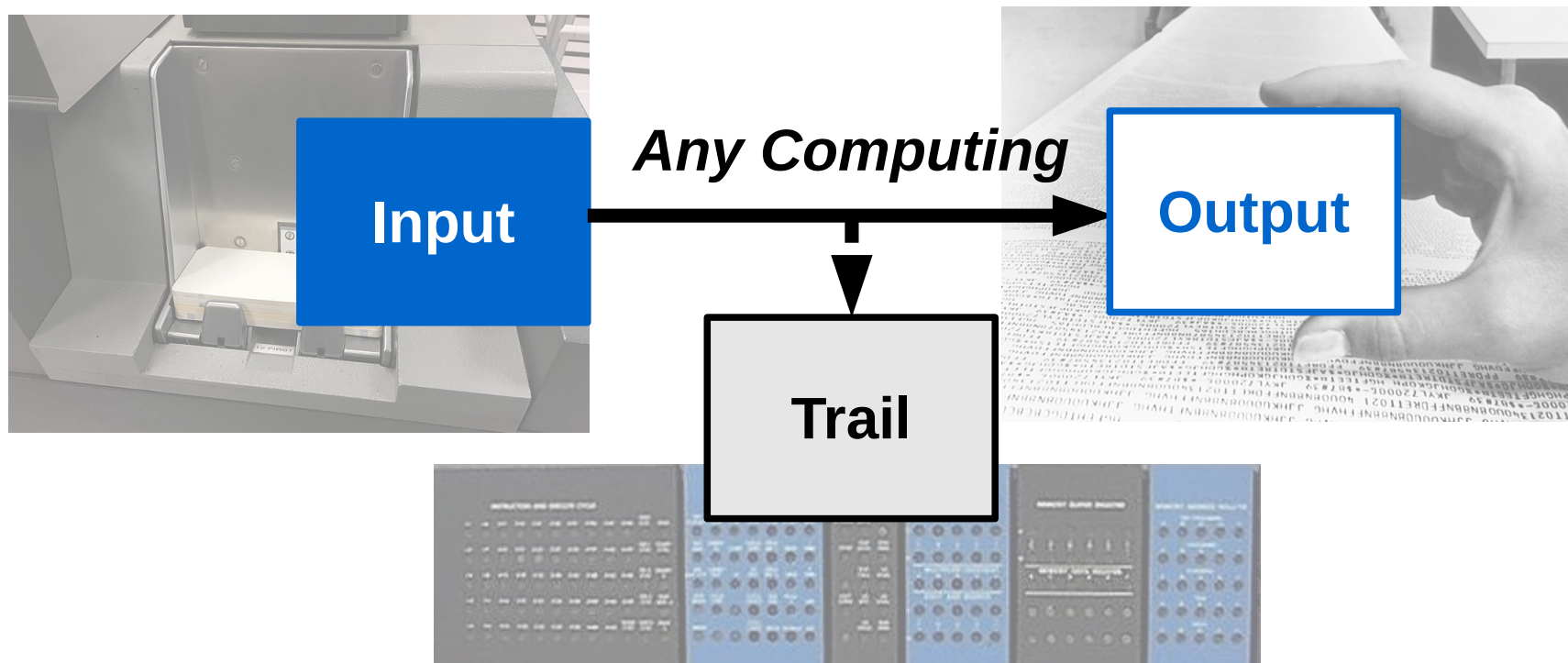
social contracts for smart networks

part I



mezzònomy – may 2017 – revised in july

What is possible to achieve by mechanical means?

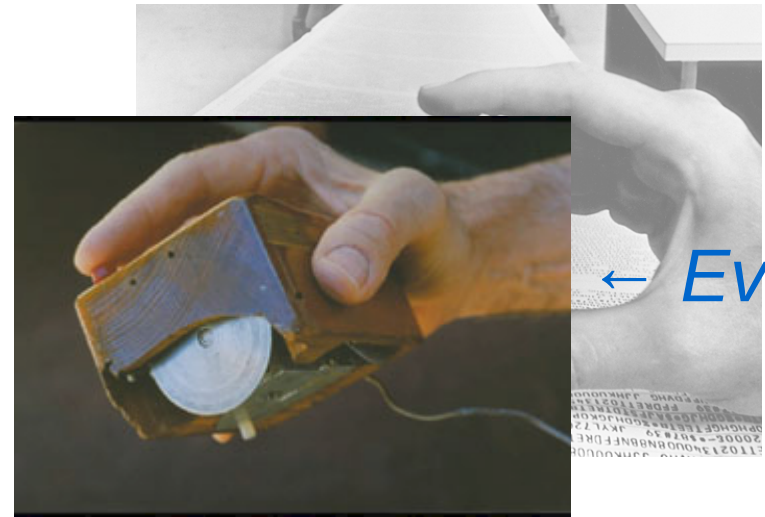
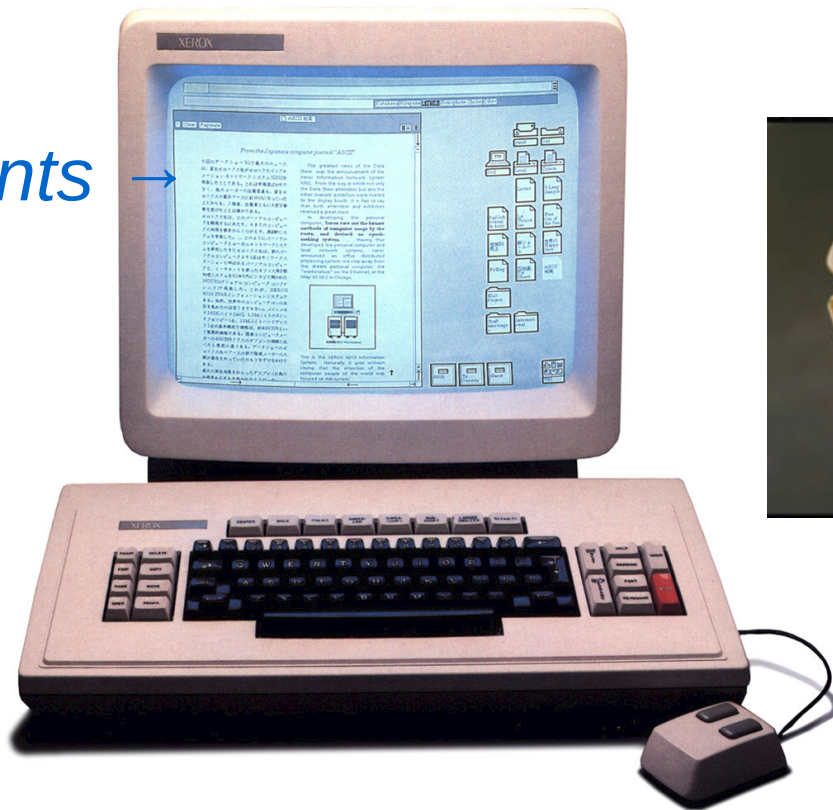


Computing *Output* is a *function* of *Input*
if and only if
it terminates and has no error in Trail



Emergence of interaction

Elements →



← *Events*

Spreadsheets →

A screenshot of a spreadsheet application on a computer screen, showing a budget table for November and December 1979.

HOME BUDGET, 1979			
MONTH	NOV	DEC	TOTAL
SALARY	2500.00	2500.00	30000.00
OTHER			
INCOME	2500.00	2500.00	30000.00
FOOD	400.00	400.00	4800.00
RENT	350.00	350.00	4200.00
HEAT	110.00	120.00	575.00
REC	100.00	100.00	1200.00
TAXES	1000.00	1000.00	12000.00
ENTERTAIN	100.00	100.00	1200.00
MISC	100.00	100.00	1200.00
CAR	300.00	300.00	3600.00
EXPENSES	2460.00	2470.00	28775.00
REMAINDER	40.00	30.00	1225.00
SAVINGS	30.00	30.00	3600.00

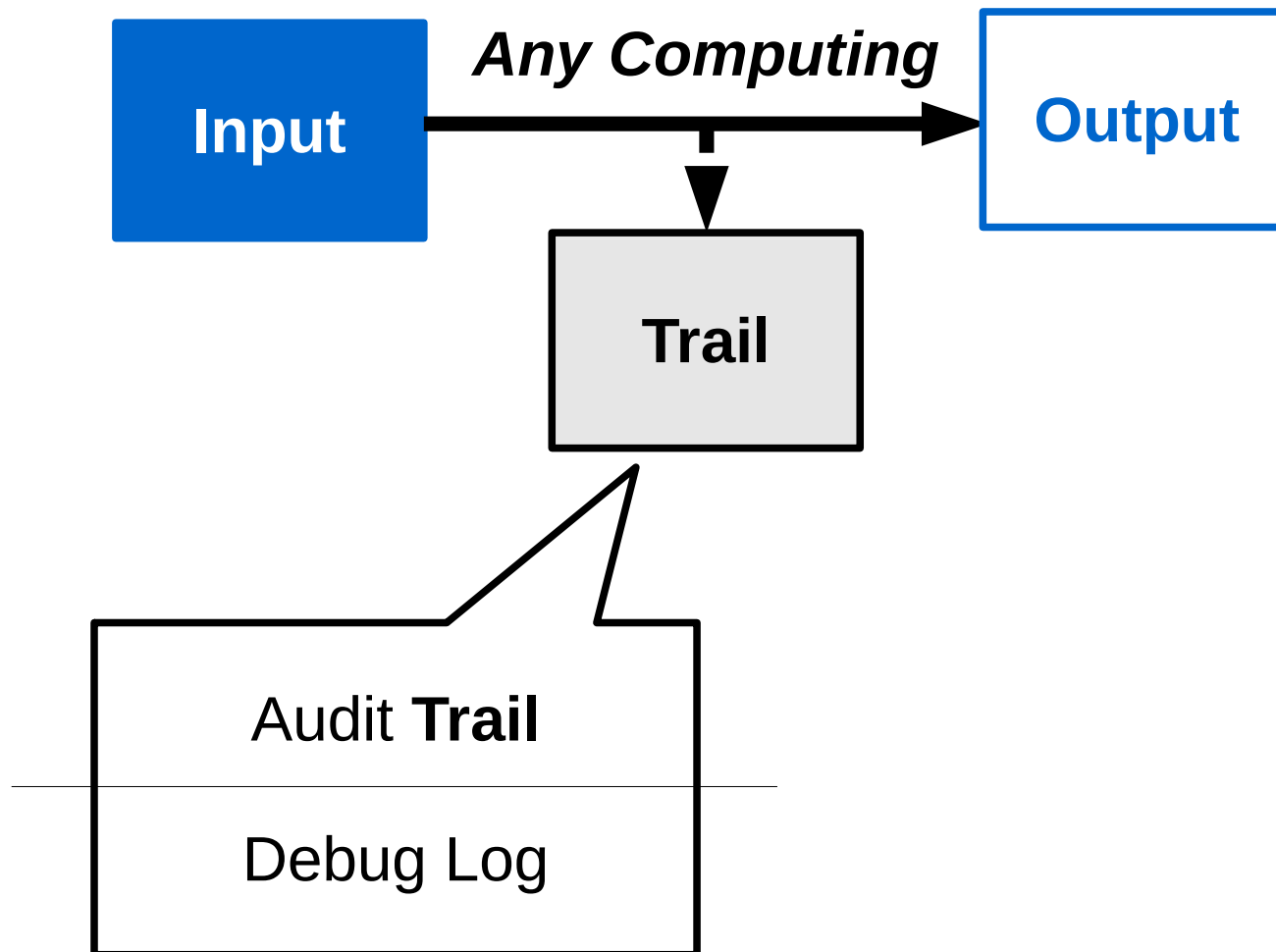
Pain of interaction

« *Interaction machines have been criticized as an unnecessary Kuhnian paradigm shift. But Gödel, Church, Turing, and more recently Milner, Wegner and Van Leeuwen have argued that this is not the case.* »
Computation Beyond Turing Machines
– P.Wegner, 1993

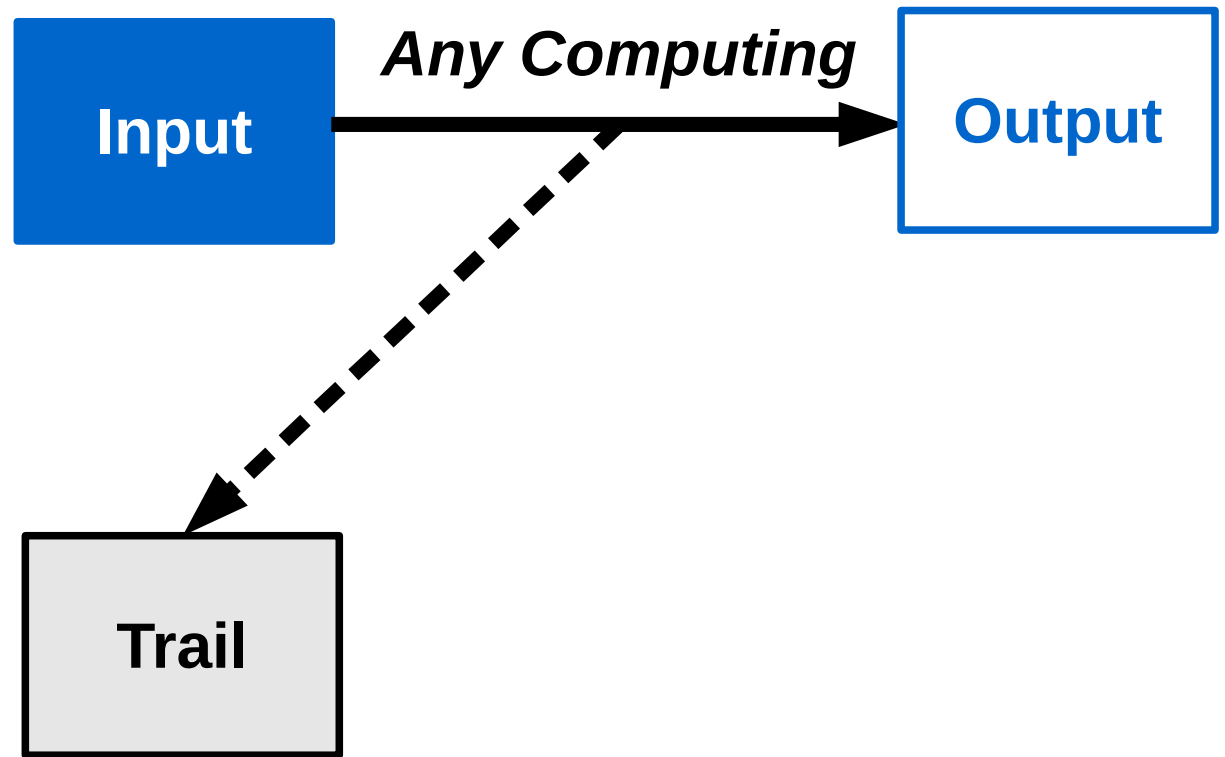
← *Complex theoretical issue*

To solve that issue → Reverse the computational model

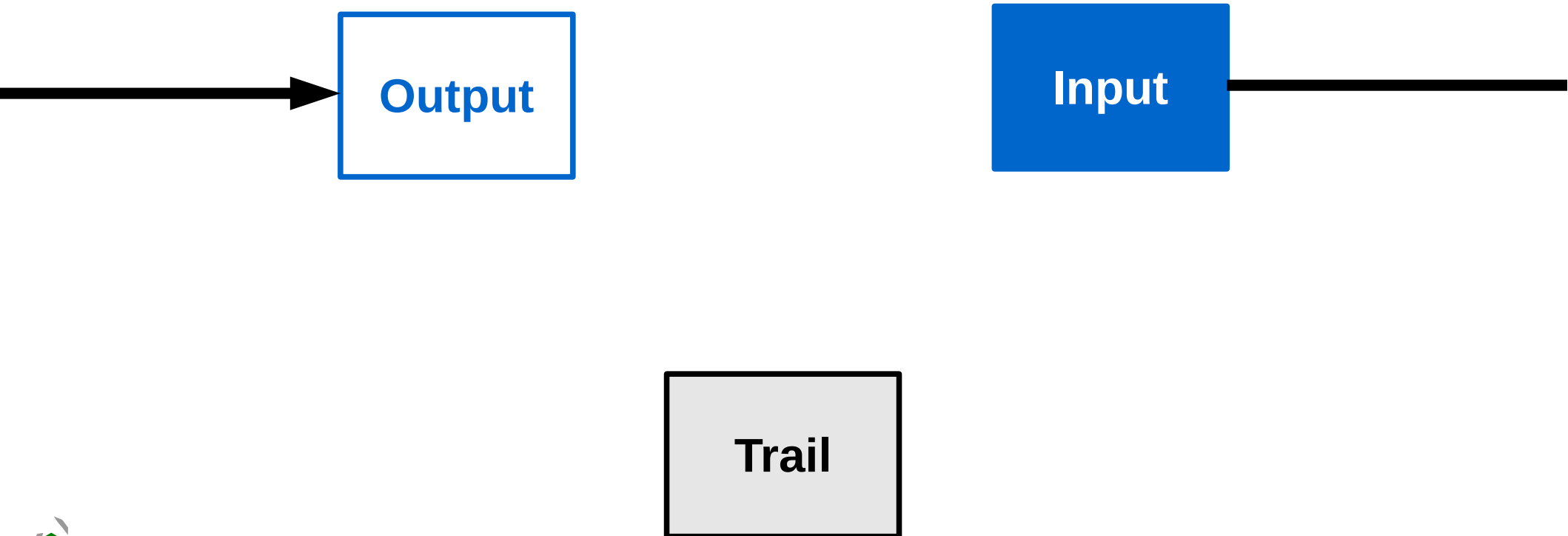
Get the computational model



Push it on the right



through the edge reversal...



Our spreadsheet interaction model



Intention

Output

Input

Trail

Regular Computing
Always **terminates**
with no **error**

HOME BUDGET, 1979			
MONTH	NOV	DEC	TOTAL
SALARY	2500.00	2500.00	30000.00
OTHER			
INCOME	2500.00	2500.00	30000.00
FOOD	400.00	400.00	4800.00
RENT	350.00	350.00	4200.00
HEAT	110.00	120.00	575.00
REC	100.00	100.00	1200.00
TAXES	1000.00	1000.00	12000.00
ENTERTAIN	100.00	100.00	1200.00
MISC	100.00	100.00	1200.00
CAR	300.00	300.00	3600.00
EXPENSES	2460.00	2470.00	28775.00
REMAINDER	40.00	30.00	1225.00
SAVINGS	30.00	30.00	3600.00



Our Regular Interactive Model



Intention

Output

Input

Trail

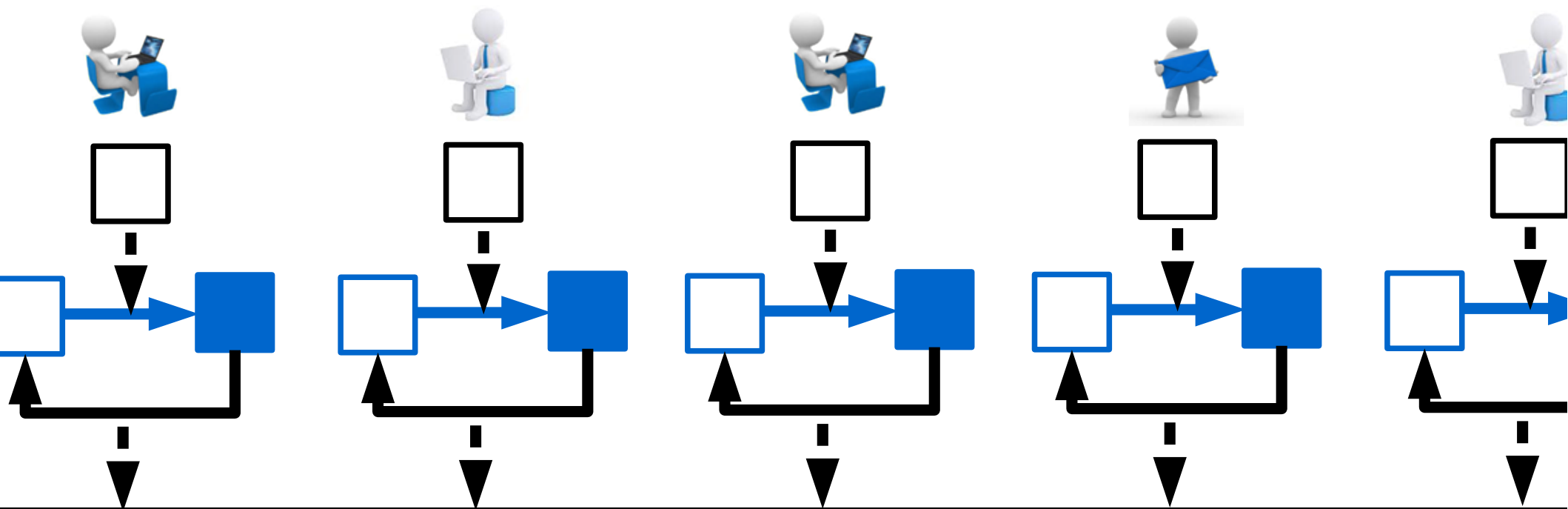
HOME BUDGET, 1979			
MONTH	NOV	DEC	TOTAL
SALARY	2500.00	2500.00	5000.00
OTHER			
INCOME	2500.00	2500.00	5000.00
FOOD	400.00	400.00	800.00
RENT	350.00	350.00	700.00
HEAT	110.00	120.00	230.00
SEC	100.00	100.00	200.00
TAXES	1000.00	1000.00	2000.00
ENTERTAIN	100.00	100.00	200.00
MISC	100.00	100.00	200.00
CAR	300.00	300.00	600.00
EXPENSES	2460.00	2470.00	4930.00
REMAINDER	40.00	30.00	70.00
SAVINGS	30.00	30.00	60.00



2010 patent identifies
value to human
feedback

Can be replicated *ad libitum*...

→ *with no possible interaction between users*

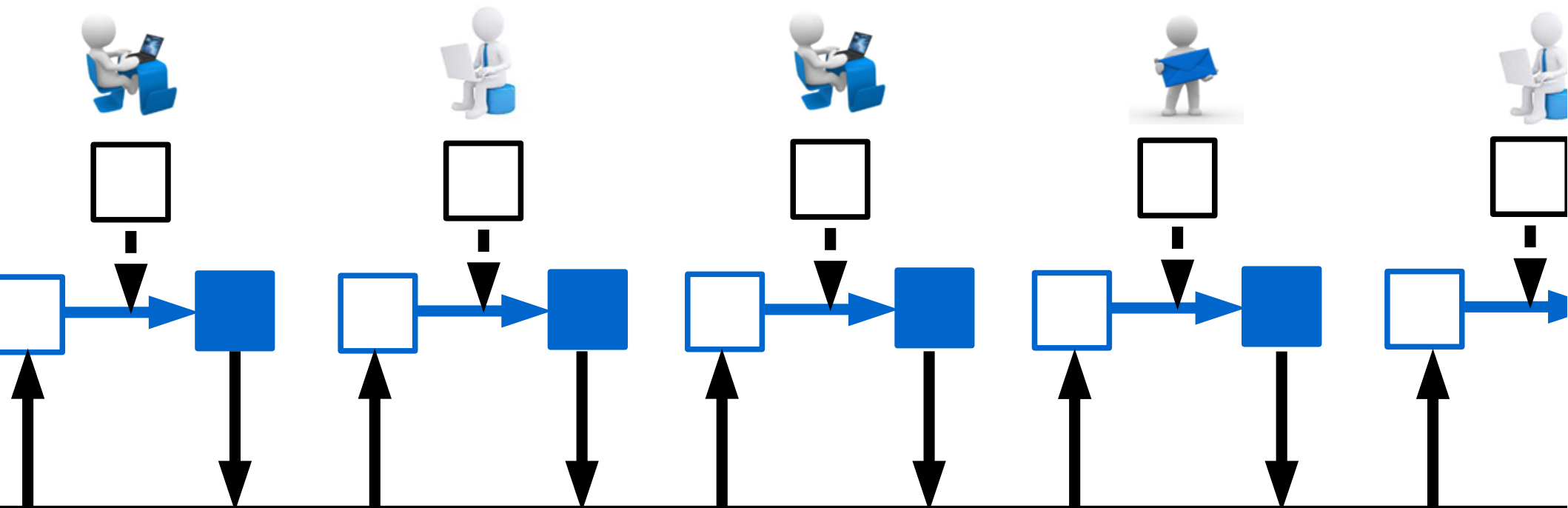


Trail



Regular Cooperative Model

→ *what if the trail was the « story » of all inputs?*



Regular Trail Computing



Regular Trail Computing

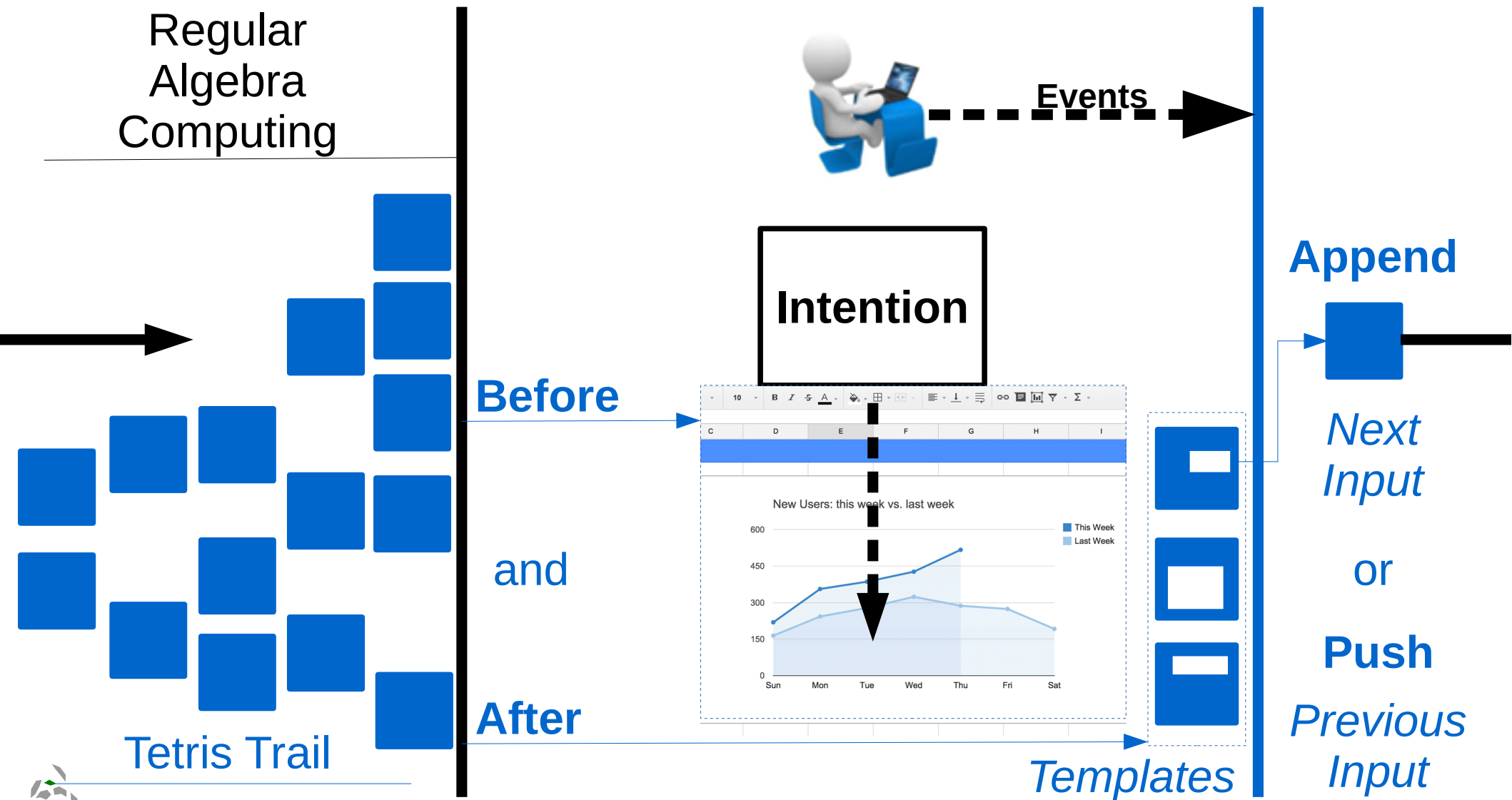
- Every **appended** input of any user is:
 - Timestamped and Signed
 - Never replicated nor altered
 - Stored for eternity when **pushed** by others as « *coins* »
- Any **output** presented to any user :
 - Issued from a regular computing on the **Trail** of all **appended** inputs with respect to user's intention:

$$\mathbf{Output} = \text{Regular}_{\text{User}}(\mathbf{Trail})$$

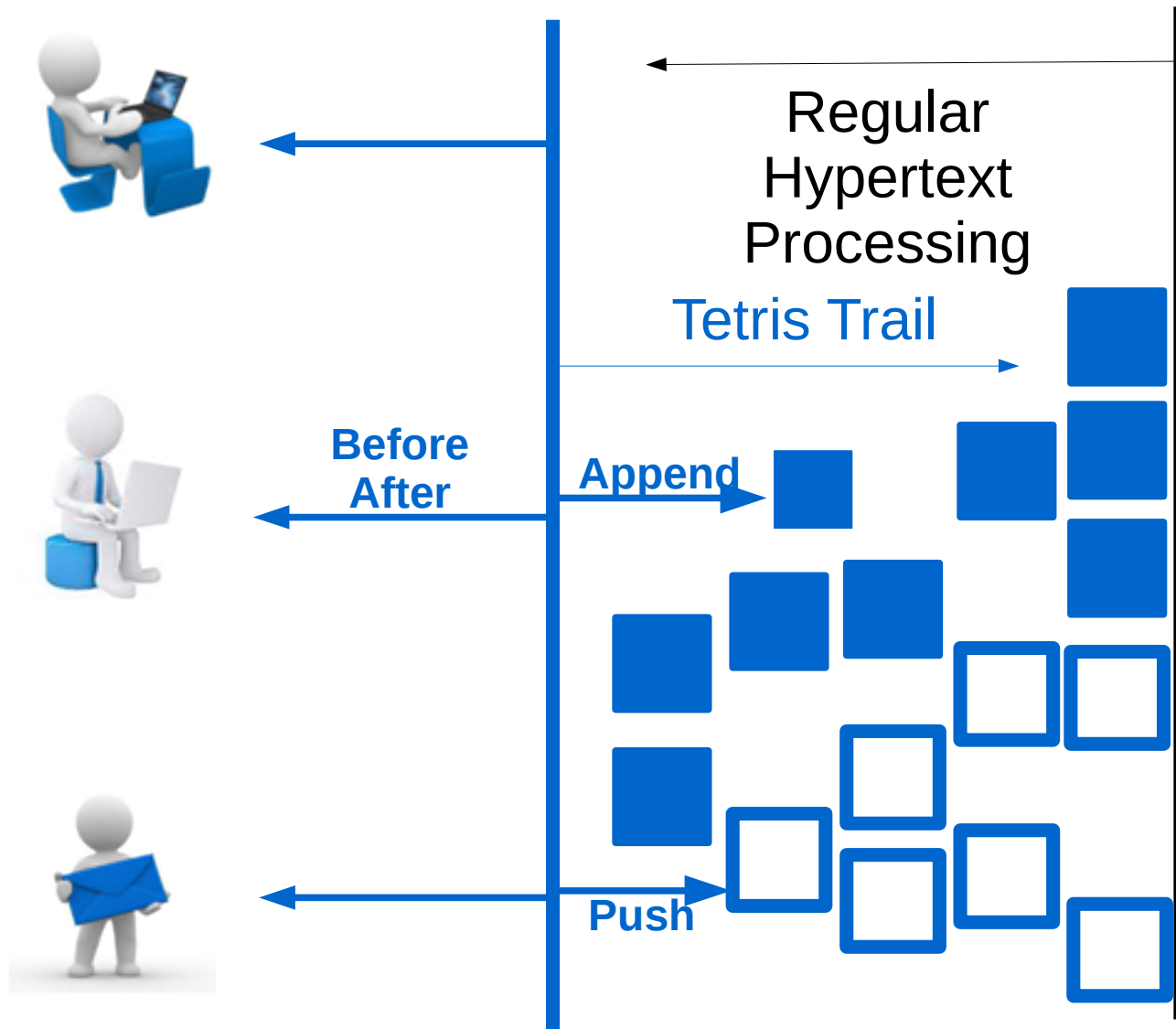
- **Output** embeds a set of **elements** to be displayed or printed called **before**
- **Output** embeds a set of **templates** issuing next **input** from user events when displayed, named **after**.



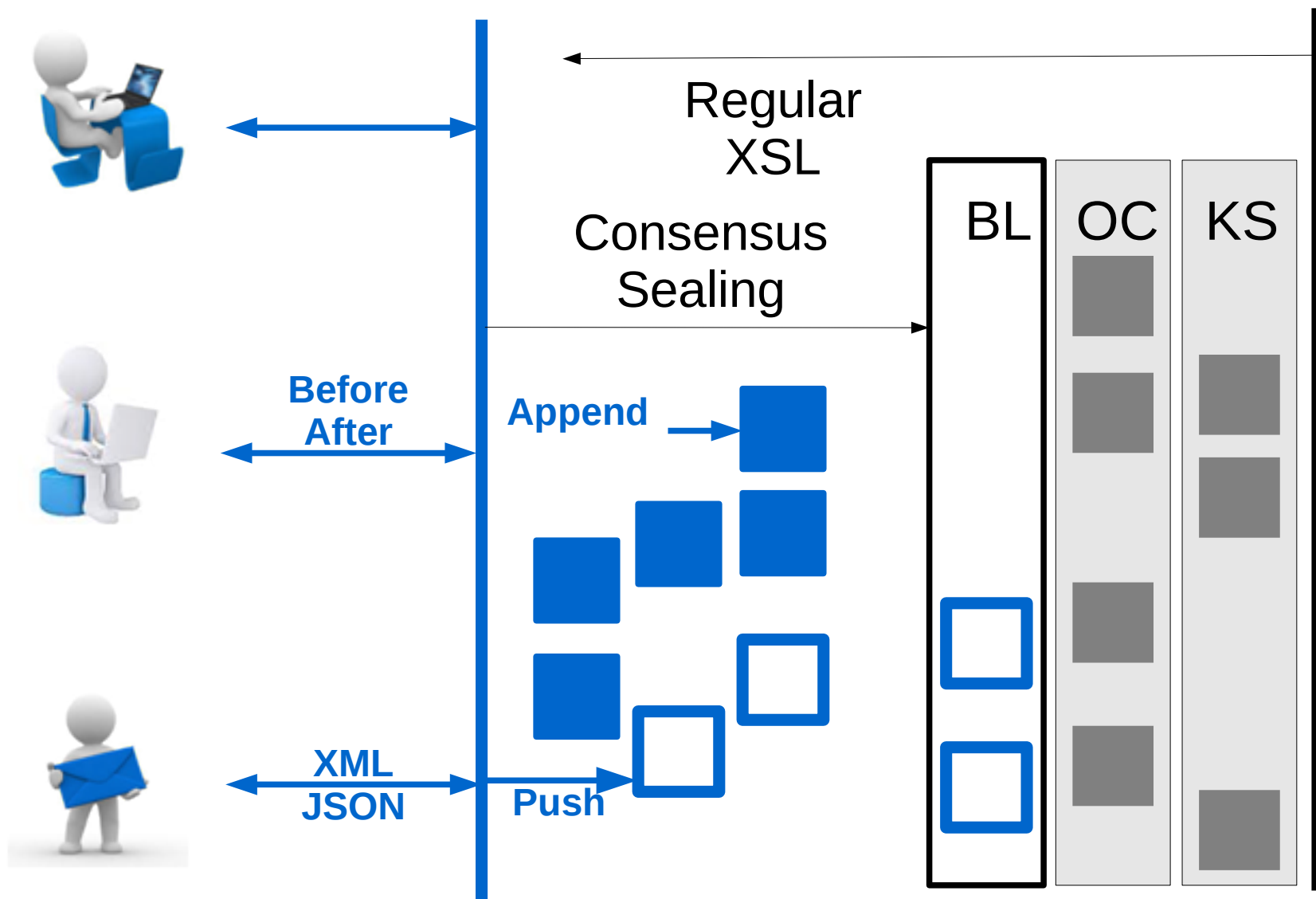
Regular Programming Interface



Regular Cooperative Hypertext



Regular Blockchain Hypertext



Prototyped with success in 2016, funded in 2017, delivered in 2018



Regular Blockchain Hypertext

Our technology allows great numbers of users, distributed over the internet to :

- Share feedbacks on the same **spreadsheets**
- Agree on « *valuable feedbacks* » (= coins)
- Keep record of all coins – *no crypto-currency*
- Publish **spreadsheets** without divulging coins
- Certifiante any spreadsheet with its coins



Method for **partial**
learning **sharing** of a
software application.

WO **2012076477 A1**

Regular Blockchain Hypertext for **spreadsheets** and **smart-contracts** will be delivered in 2018.

Its use will be **extended to any document** in 2019 and then to any content (3D, video, sound, data lakes, ...).



An iceberg floating in a blue ocean under a blue sky with wispy clouds. The visible tip of the iceberg is small and jagged, while the submerged part is much larger and more complex in shape. The text "social contracts for smart networks" is written in white across the submerged part of the iceberg.

social contracts for smart networks

TO BE CONTINUED...

