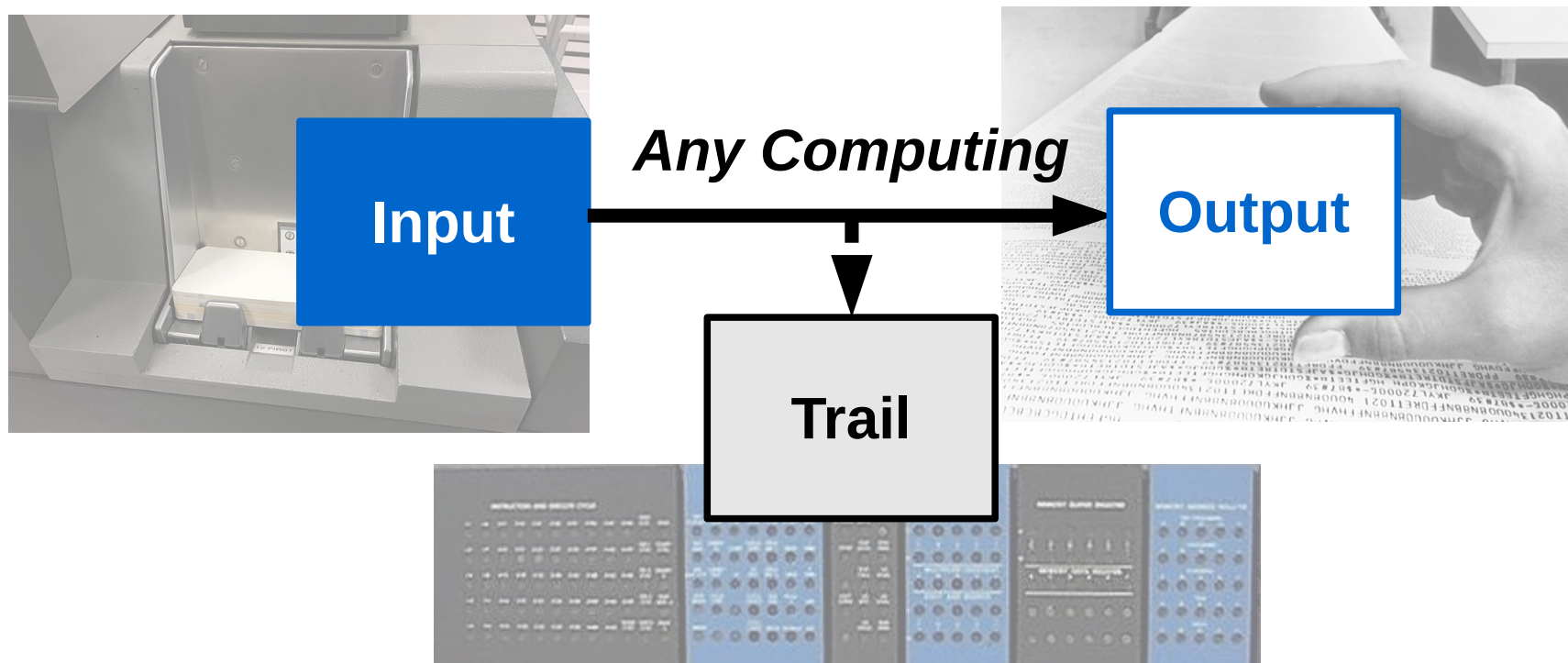


from computing to interaction, blockchain and hypertext...

A story of men and machines

What is possible to achieve by mechanical means?

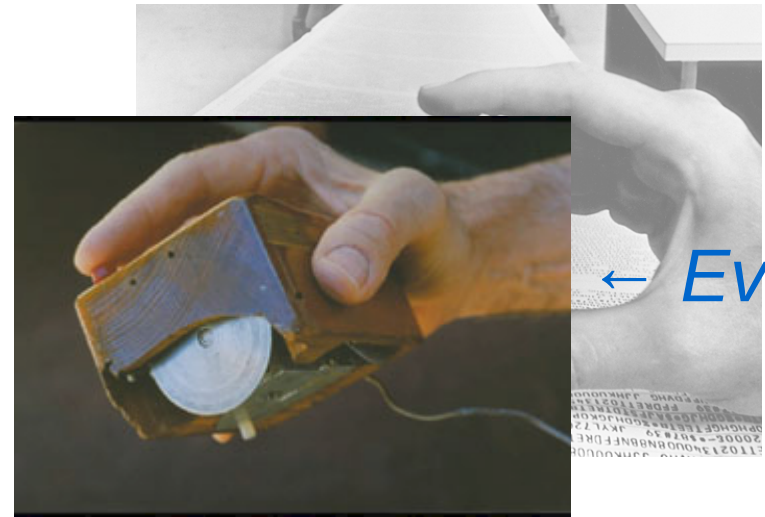
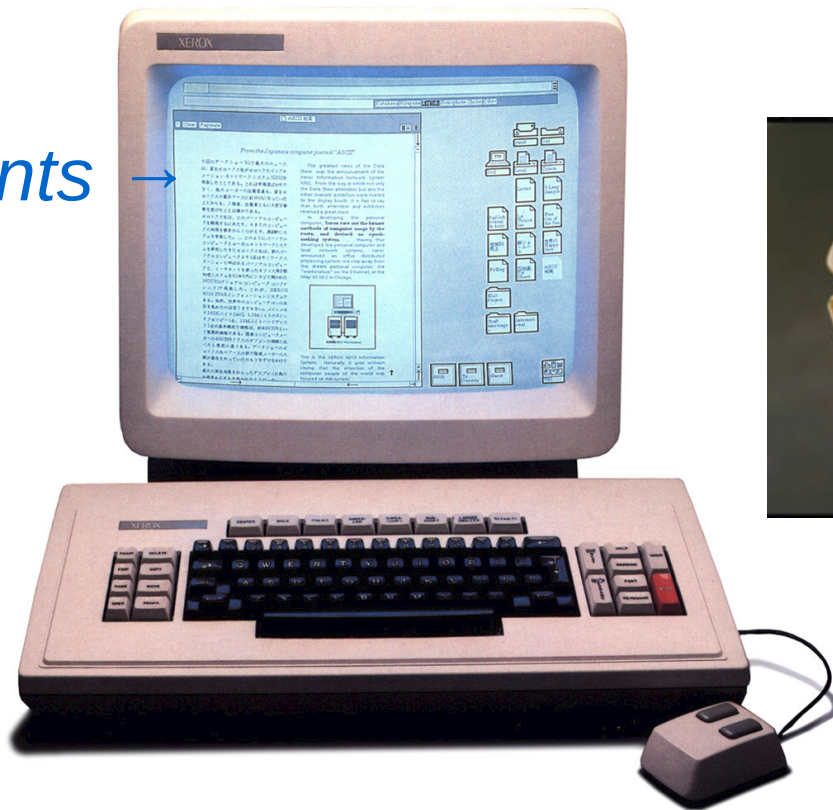


Computing *Output* is a *function* of *Input*
if and only if
it terminates and has no error in Trail



Emergence of interaction

Elements →



← *Events*

Spreadsheets →

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

Spreadsheet interaction model



Intention

Output

Input

A screenshot of a spreadsheet application window titled 'HOME BUDGET, 1979'. The spreadsheet shows a budget breakdown for November and December, with a total for each month and a grand total. The data is as follows:

	NOV	DEC	TOTAL
MONTH			
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
REC	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	2400.00	2470.00	4870.00
REMAINDER	100.00	30.00	130.00
SAVINGS	30.00	30.00	60.00

Always *terminates*
with no *error*

Regular Interactive Model



Intention

Output

Input

Terminating + error free

= Regular

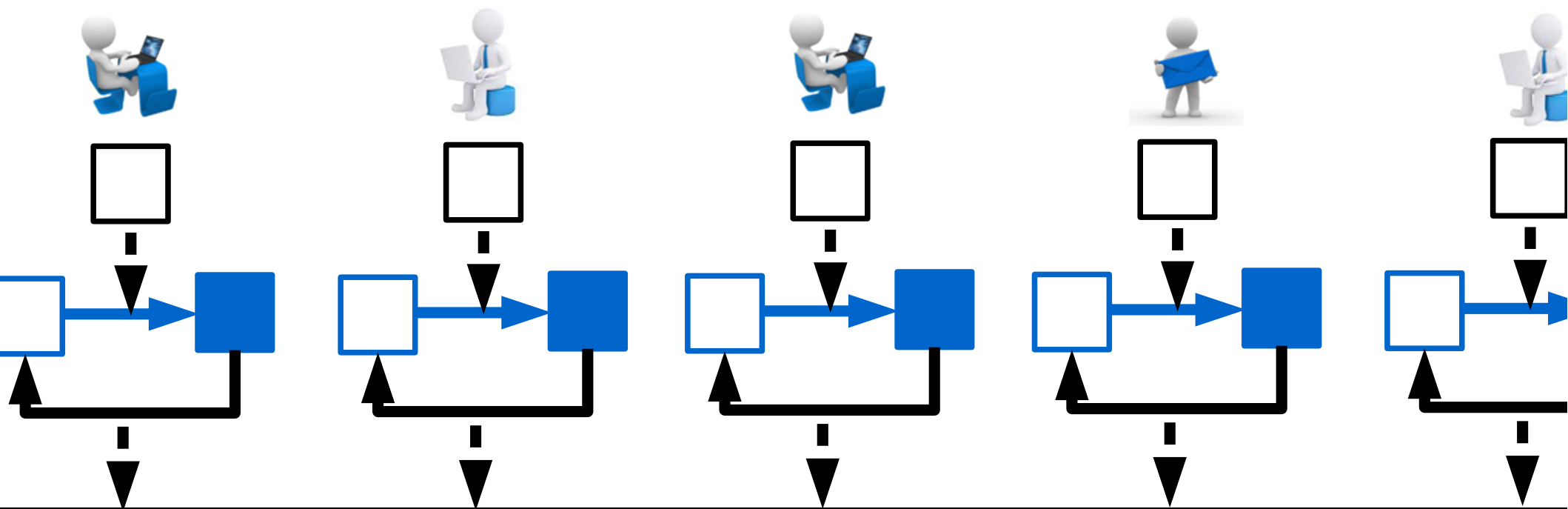
Trail

identifies value to
human feedback

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
SEC	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

Can be replicated *ad libitum*...

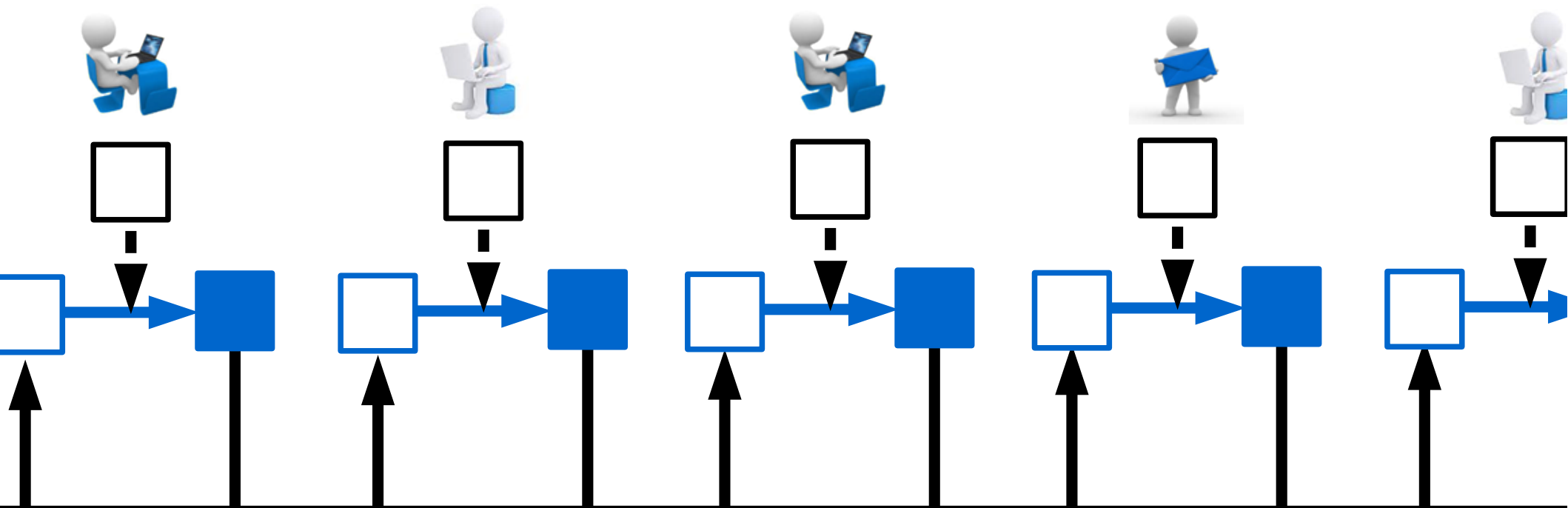
→ *with no possible interaction between users*



Trail

Regular cooperative model

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



Regular Trail Computing

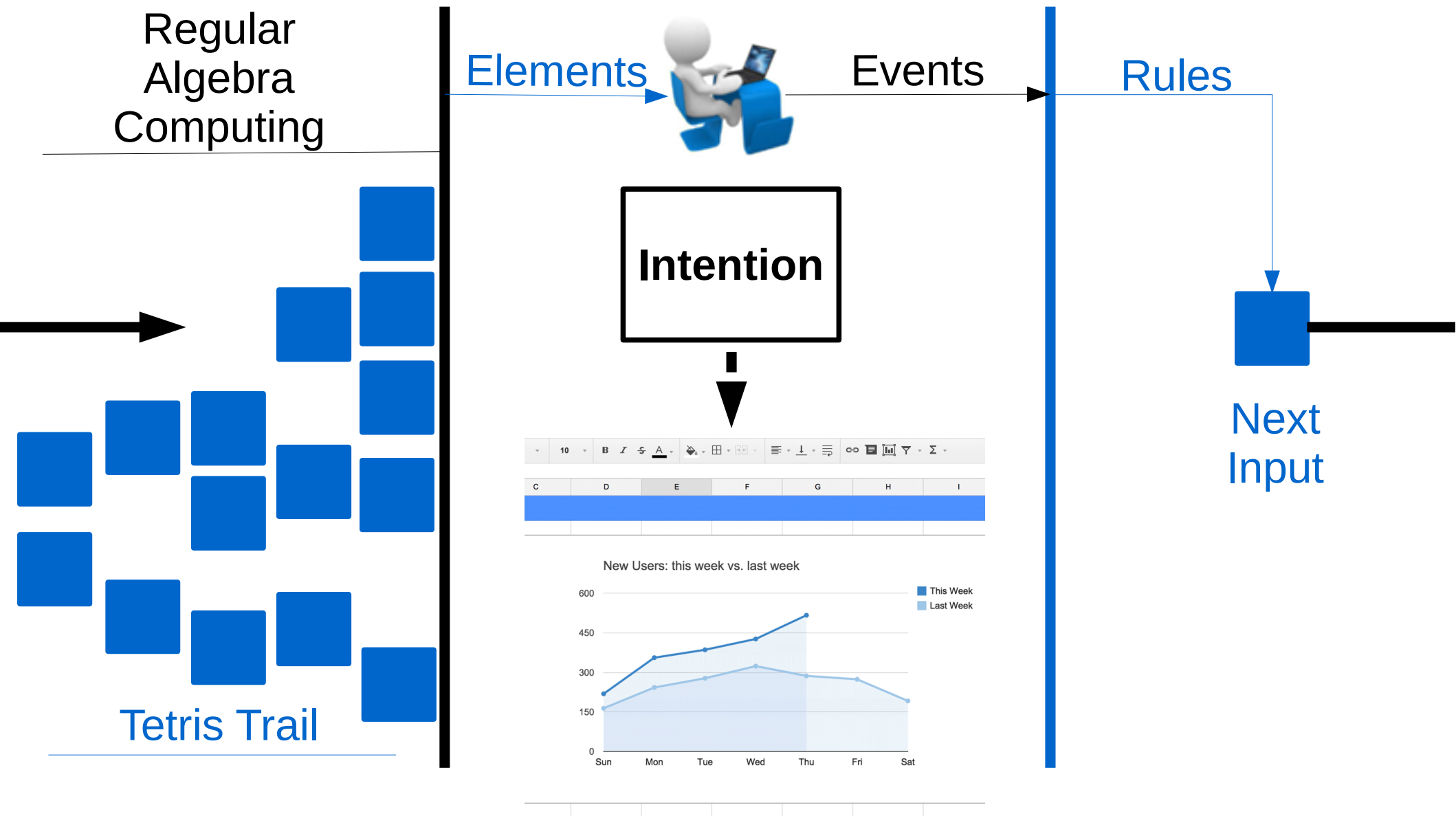
Regular Trail Computing

- Every **input** of any user is:
 - **Timestamped and Signed**
 - **Never replicated**
 - **Stored for eternity when validated by others** → « *coins* »
- Any **output** presented to any user :
 - Issued from a regular computing on the trail of all **inputs** with respect to his intention:

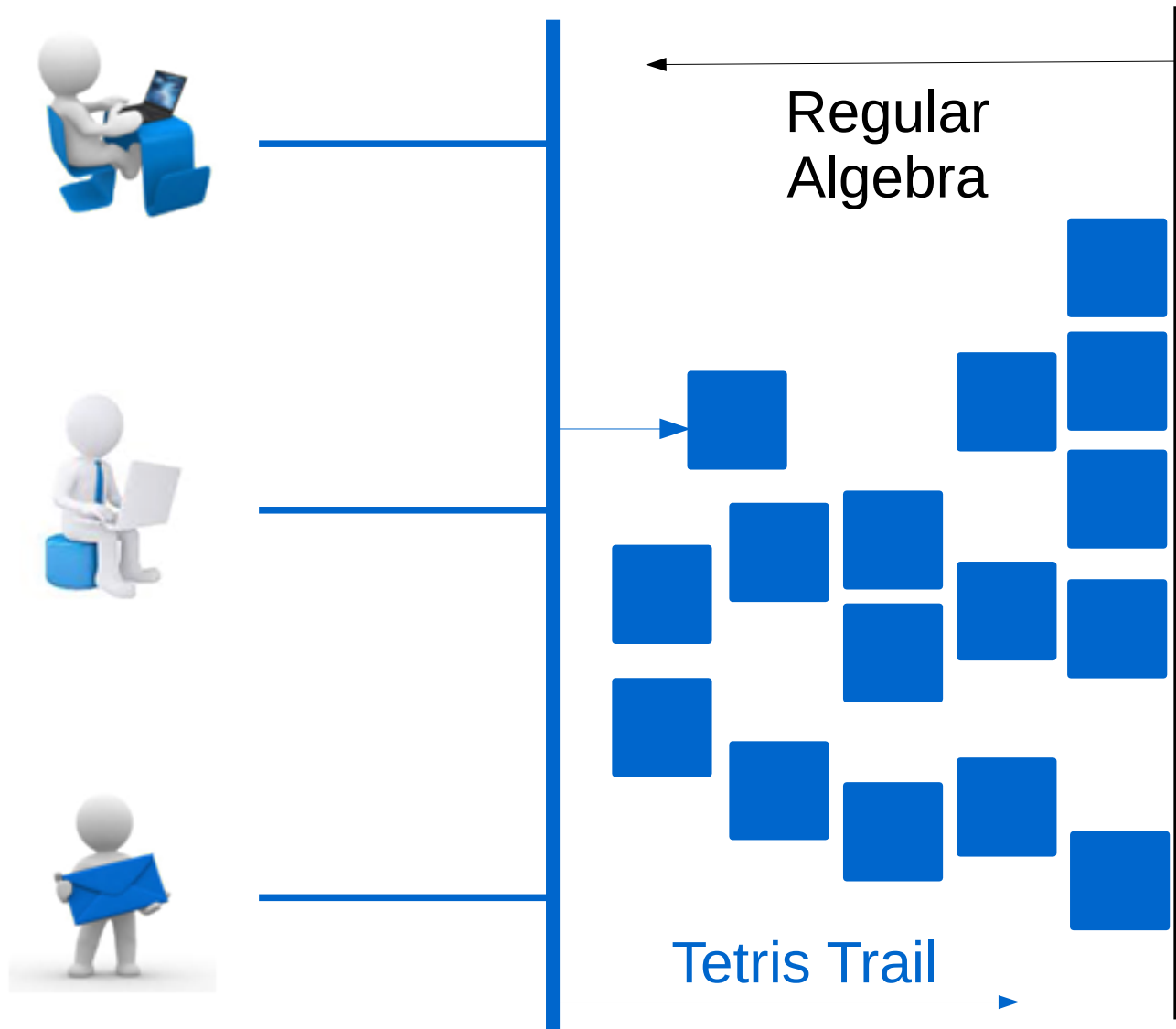
$$\mathbf{Output} = \text{Regular}_{\text{User}}(\mathbf{Trail})$$

- embeds a set of **elements** to be displayed or printed
- embeds a set of **rules** issuing next **input** from user events when displayed

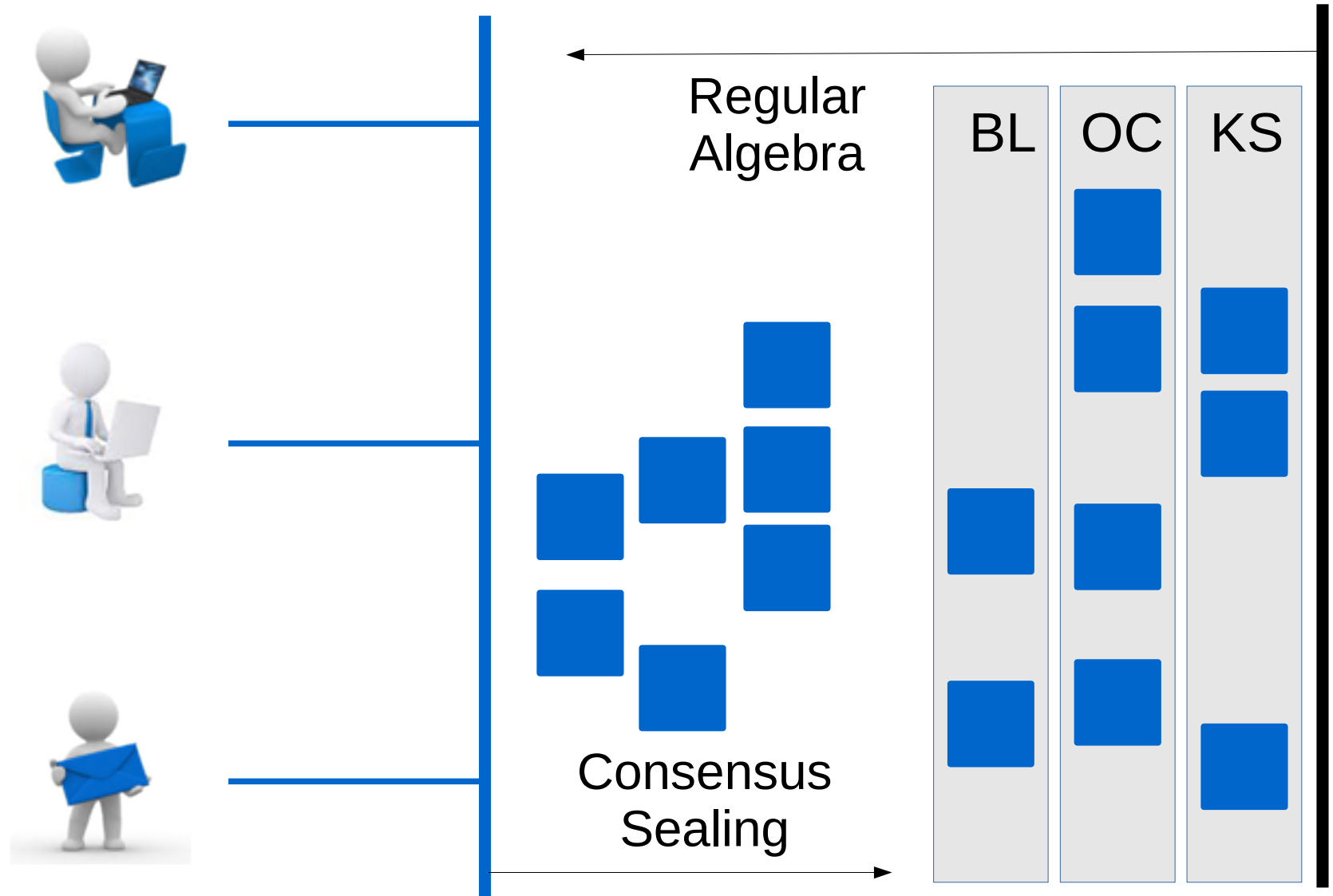
Regular Interactive Hypertext



Regular Cooperative Hypertext



Regular Blockchain Hypertext



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, ...) following the demand.