

# snip a user centered lab book

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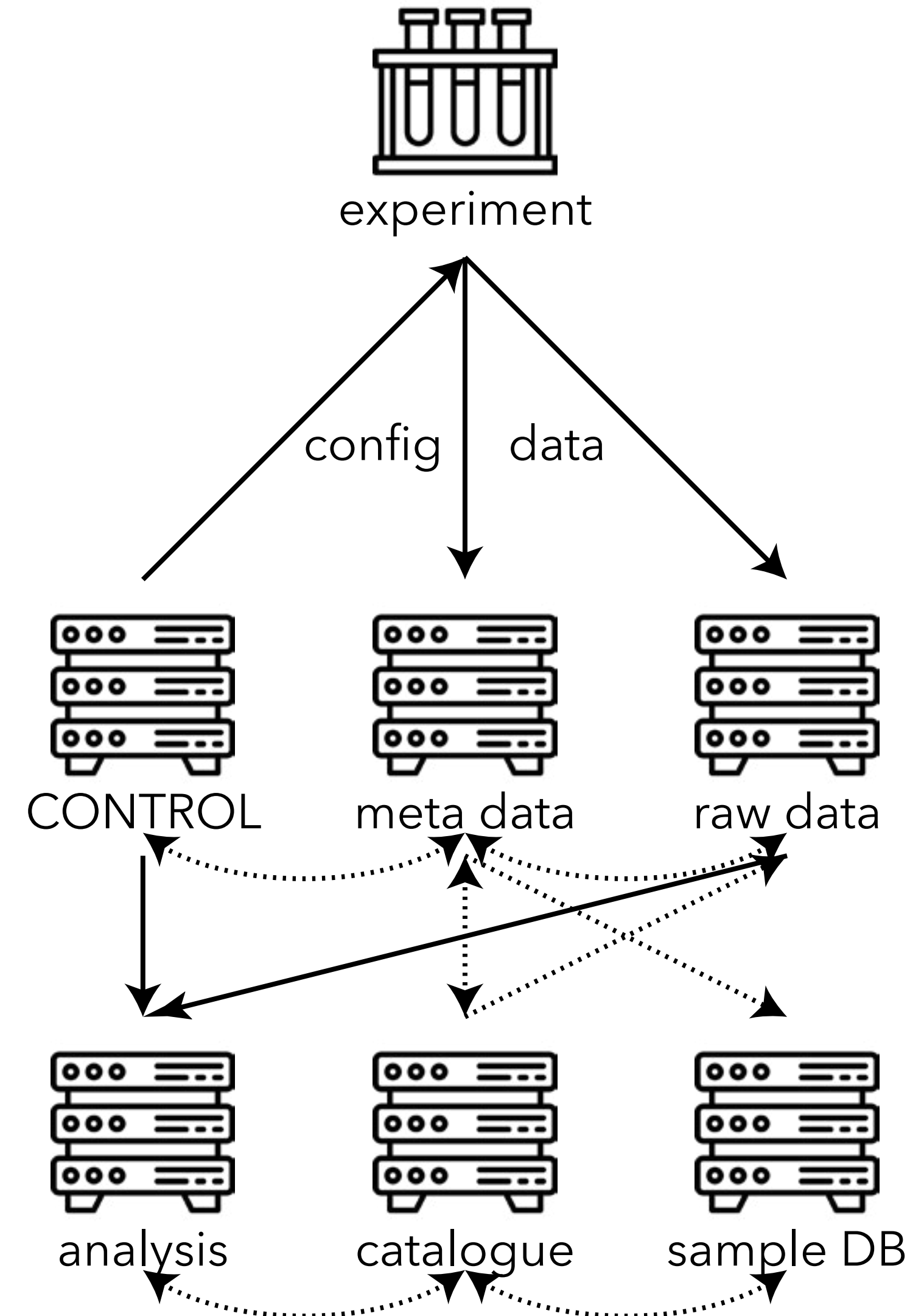
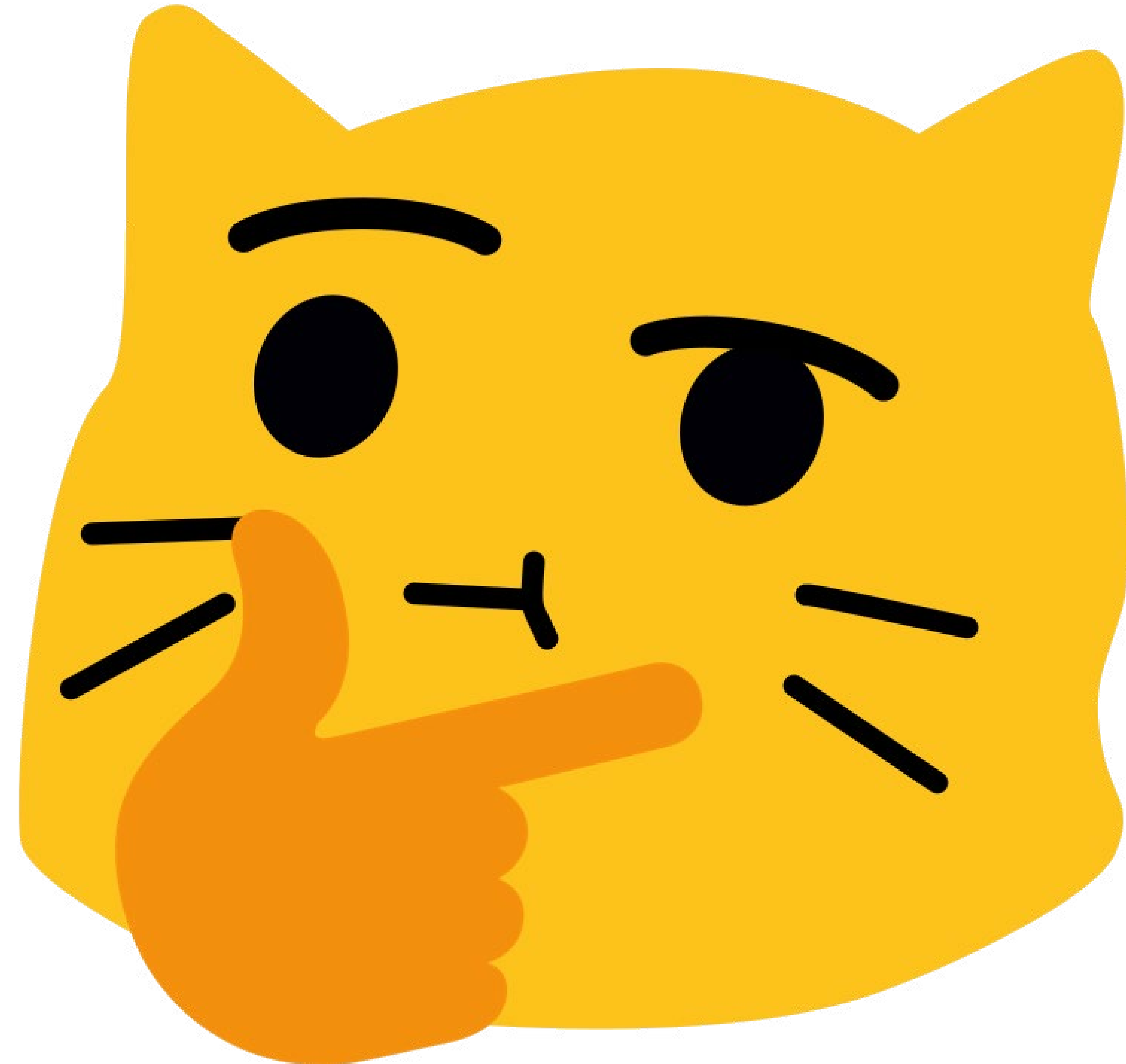
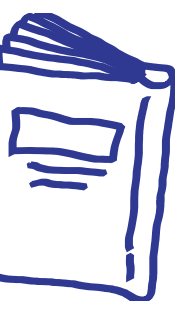




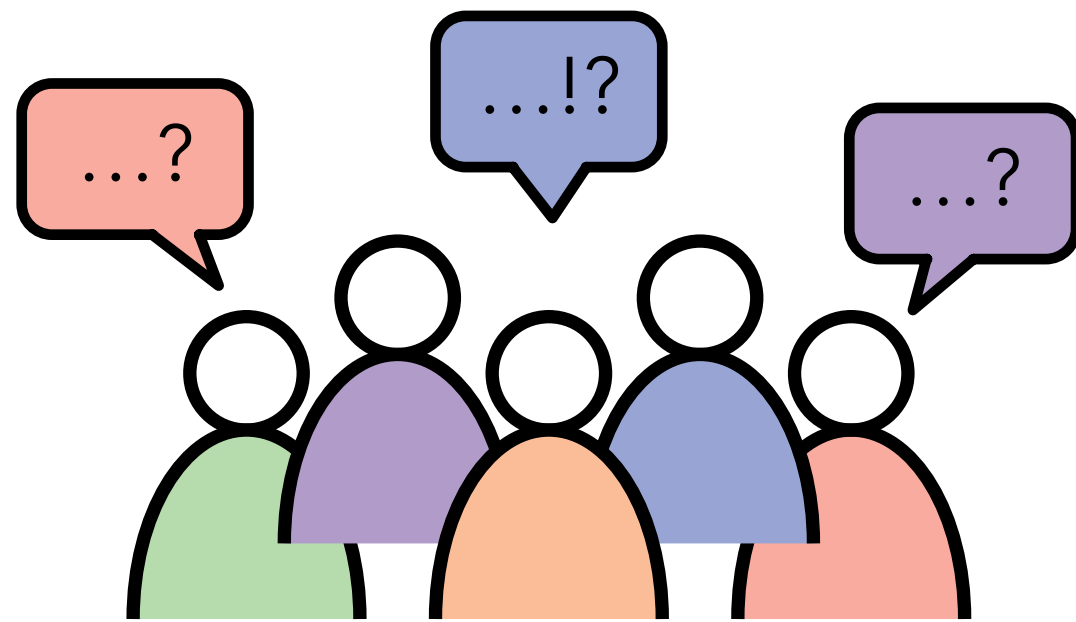
# Experiments



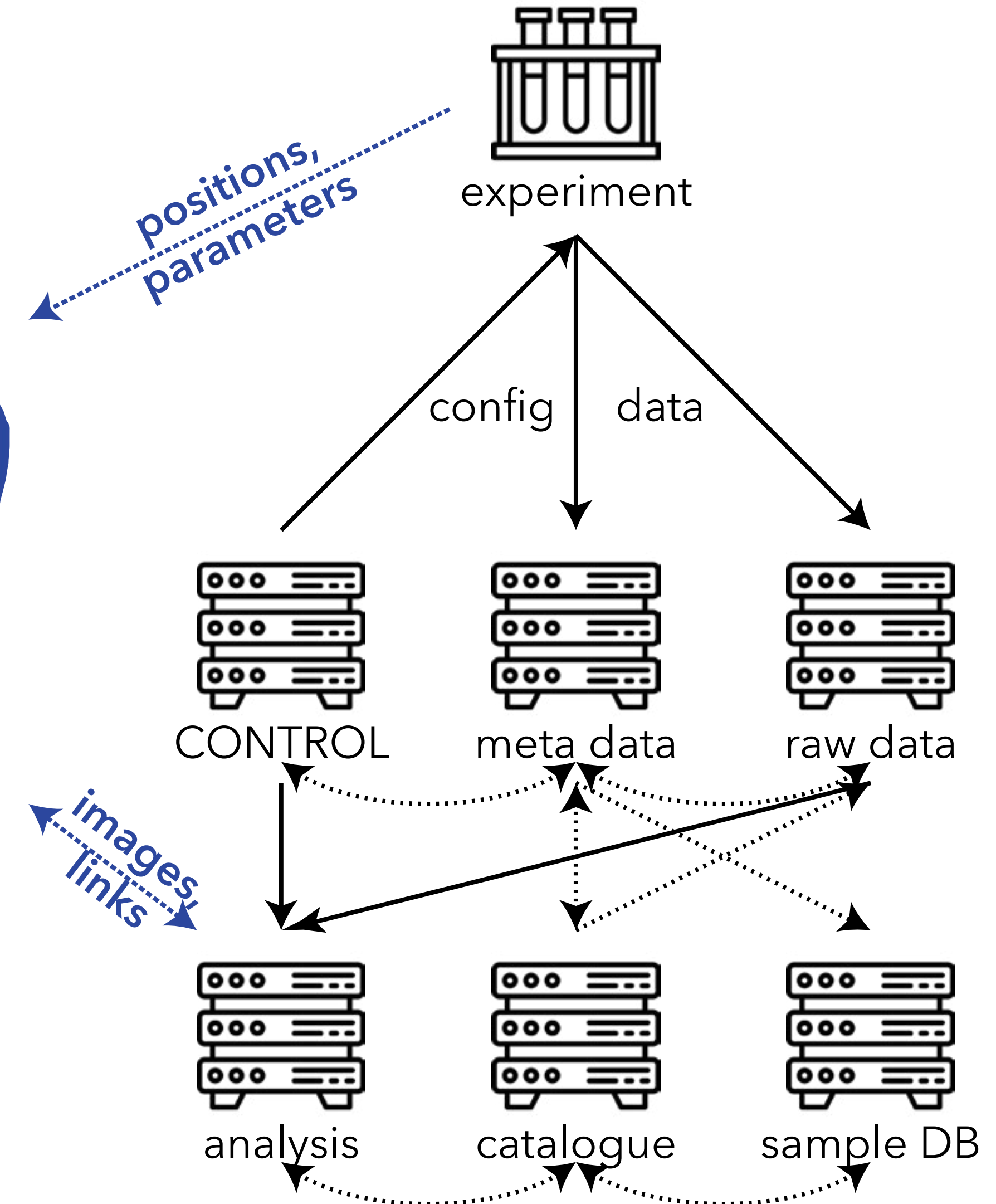
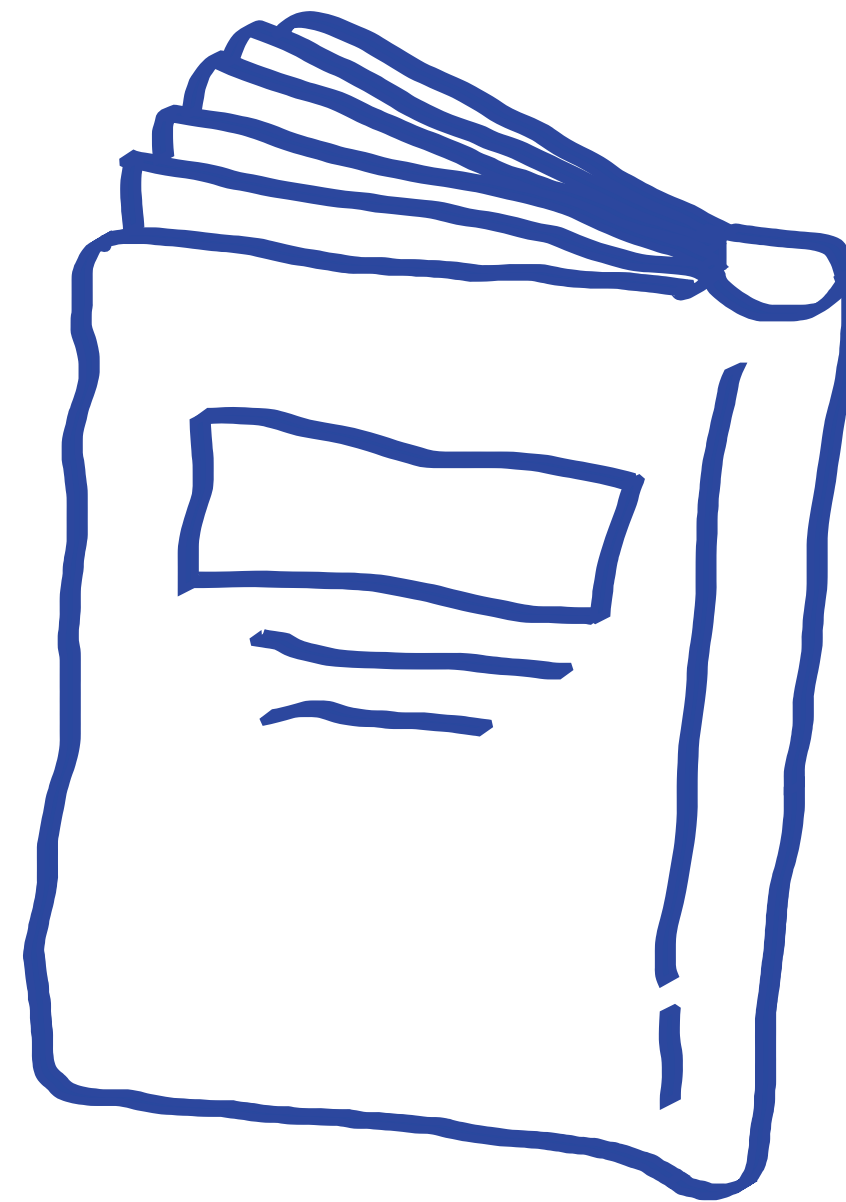
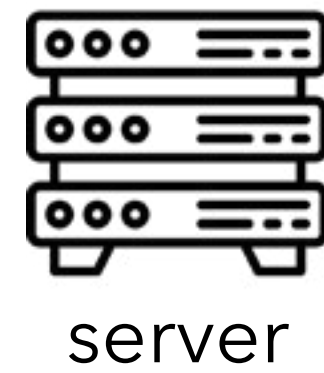
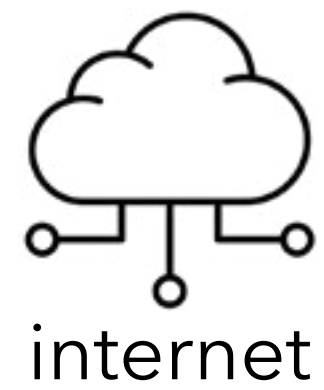
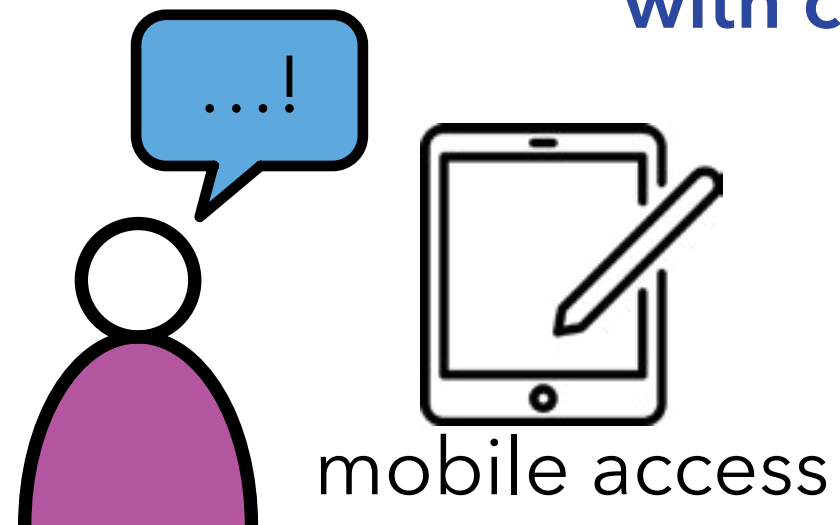
# Automatic data flow - why (another) ELN?



# snip: Discussing the Experiment



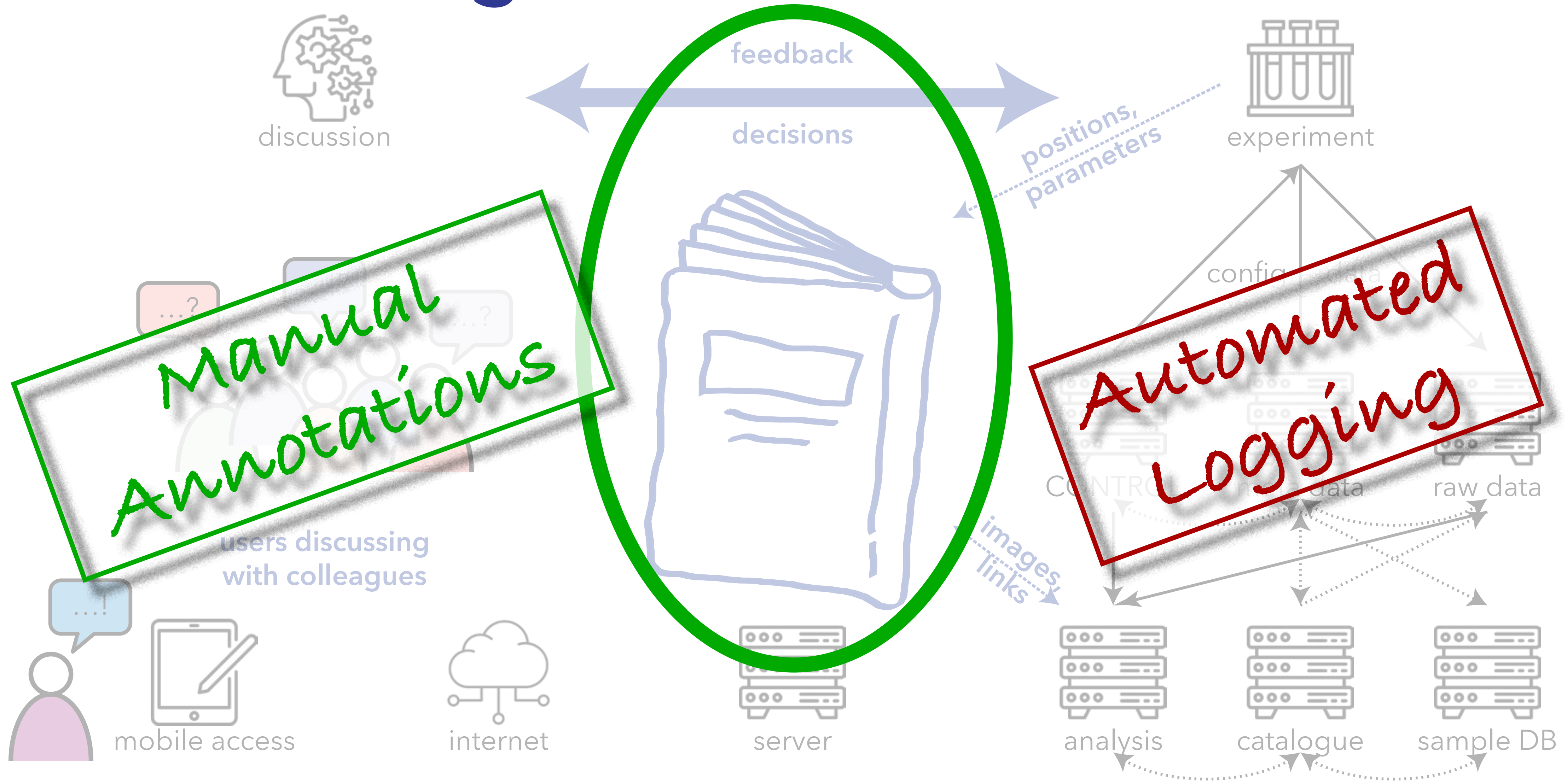
users discussing with colleagues







# Documenting Discussions and Decisions



# Documenting Discussions and Decisions





# Snip - Examples (2)



The screenshot shows the Snip application interface. On the left, there is a 'Pages' panel with a search bar and a grid of page previews numbered 17 to 22. The main area is titled 'Snips to place' and contains a central editing area. This area has a toolbar with color and size options, and a large text editor displaying a macro code. The macro code is for a tomographic scan of an elephant brain. Handwritten notes in red and blue are present in the editor. On the right side, there is a callout box with the text 'single page: macro + pen entry'. At the bottom, there is a footer with version information and navigation links.

run110

Jetzt Elefantengehirn  
ungefärbt,  $\phi$  8mm Blocks, Paraffin

macro: TGN\_230525\_RH\_AE218\_23\_1\_tomo01.mac  
Sat Jun 17 17:32:17 2023  
# PB - 1 tomo  
# z12 = 2.5mm (in etwa)  
juppoff  
newfile TGN\_230525\_RH\_AE218\_23\_1\_tomo01

# set sample positions  
x\_start = 150;  
y\_start = -0.5000;  
z\_start = 20.12; # change  
cx\_start = 1.5061; # change  
cy\_start = 2.5500; # change  
cz\_start = 1.5602; # change, value where bottom of sample is in FOV

cx\_empty = cx\_start;  
cy\_empty = cy\_start - 5;  
cz\_empty = cz\_start;

# stitch plane  
num\_positions\_x = 1; # muss ungerade sein  
num\_positions\_y = 1; # muss ungerade sein  
delta\_xy = 1.1; # overlap ist auf dem knappen ende, max. 1.17

# stitch in height (z fährt anders als x und y)  
num\_positions\_z = 1;  
delta\_z = 1; # overlap ist auf dem grosszuegigen ende, stepsize max. 1.1

# jupp parameters  
numangles = 3000;  
numflats = 500;  
numdarks = 100;

# parameters for si 25um x 0 (p10\_abs)  
illutime = 35; # ms  
readout = 15; # ms

shopen; sleep(20);

# tomo scans  
for (k=0; k<num\_positions\_z; k++) {  
# intermediate empties  
umv stzrot 0 stx x\_start sty y\_start stz z\_start;  
umv cx cx\_empty cy cy\_empty cz cz\_empty;  
seq\_pco numflats illutime readout;  
umv cx cx\_start cy cy\_start cz cz\_start;  
umv cz cz\_start+k\*delta\_z  
for (i=0; i<num\_positions\_x; i++) {  
umv cx cx\_start+(1-0.5\*(num\_positions\_x-1))\*delta\_xy  
for (j=0; j<num\_positions\_y; j++) {  
umv cy cy\_start+(j-0.5\*(num\_positions\_y-1))\*delta\_xy  
tomo\_pco numangles illutime readout  
}  
}  
}  
# last empties  
umv stzrot 0 stx x\_start sty y\_start stz z\_start;  
umv cx cx\_empty cy cy\_empty cz cz\_empty;  
seq\_pco numflats illutime readout;  
umv cx cx\_start cy cy\_start cz cz\_start;

# darks  
shclose; sleep(10);  
seq\_pco numdarks illutime readout;

# zurueck auf Ausgangsposition  
umv stzrot 0 stx x\_start sty y\_start stz z\_start;  
umv cx cx\_start cy cy\_start cz cz\_start;

# rotate to change sample easily  
umv stzrot 180

Flats wurden in der Probe auge  
no

Color  
+  
Size  
4

single page:  
macro + pen entry

page previews,  
incl. live update

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# Snip - Examples (3)



Snip run108

Pages Snips to place

This book is finished! It can no longer be edited. All changes are only local and will not be saved.

Search

alignment scans

detector image

microscope image

webcam image

Snips to place (45-462)

11el, scan 60  
scan olx -0.2 0.2 40 0.1  
Sat Jun 17 00:29:41 2023

Scan 60  
Peak at 0.146507, 0.146507  
Peak at 0.146507, 0.146507

11el, scan 40  
scan podz -238.564 -218.564 20 0.1  
Sat Jun 17 00:01:37 2023

Scan 40  
Peak at -220.88, 14.50991, 222.19  
Peak at 17.440 90 -227.15

11el, scan 59  
scan olx -0.2 0.2 40 0.1  
Sat Jun 17 00:29:15 2023

Scan 59  
Peak at 0.0114, 0.28213, 0.28213

11el, defino 343  
Fri Jun 16 23:21:00 2023

defino 343  
Peak at 2722.84, 2922.84, 100 0.1  
Sat Jun 17 00:23:07 2023

Scan 54  
scan podz 2722.84 2922.84 100 0.1  
Sat Jun 17 00:23:07 2023

Scan 54  
Peak at 2842.9, 12.820, 2820.0  
Peak at 2.2215, 0.2842.9

file: Kullitha\_v3\_R3\_realignAfterPB\_03 cam: oav image: 0  
Sat Jun 17 00:58:24 2023

file: Kullitha\_v3\_R3\_realignAfterPB\_03 cam: colli image: 0  
Sat Jun 17 01:03:23 2023

file: Kullitha\_v3\_R3\_realignAfterPB\_03 cam: axis image: 0  
Sat Jun 17 00:55:33 2023

Unit	High	Low
Beam	200.0000	-8.8541
Current	1.8810	-0.0001
Diag	-8.8880	18.3470
High	37.7410	-18.3420
Low	238.4400	-8.4500
Unit <th>High</th> <th>Low</th>	High	Low
Beam	101.8701	281.0000
Current	-0.0001	0.0000
Diag	-9.7094	-9.8000
High	-32.0534	-49.2710
Low	90.9247	125.6204
Unit <th>High</th> <th>Low</th>	High	Low
Beam	23.0000	23.0000
Current	-0.7628	11.8140
Diag	-8.8000	34.0000
High	11.1009	-12.8940
Low	-1.0000	-1.0000

Unit	High	Low
Beam	191.0000	23.0000
Current	100.0000	-0.7628
Diag	-11.8800	11.8800
High	-44.3710	24.9137
Low	123.6284	40.1009

Unit	High	Low
Beam	101.0000	23.0000
Current	33.8140	909.4020
Diag	-9.7628	-9.7628
High	-11.8800	-11.8800
Low	-1.0000	-1.0000

„Dit is schmoft!“



Berlin dialect: This is smooth!





# Snip - Examples (3)



alignment scans

„Dit is schmoft!“

Drawing a Creative Collage of Computer-Generated Contents with Real-Time Communication to Document Discussion and Decisions

detector image

webcam image





# Snip - Examples (4)

## ACLs

**define:**

- ▶ who can read/write a lab book?

**for:**

- ▶ individual users
- ▶ groups

**API token**

- ▶ to send snips

**public token**

- ▶ for anonymous read only access

The screenshot shows the 'Snip' application interface. The top navigation bar is dark blue with the 'Snip' logo and a menu icon. The left sidebar has 'Info' and 'Access' tabs. The main content area is titled 'Access Control List' and includes a form to add users and a table of current users with permission toggles. Below this is the 'API Tokens' section with a 'Create token' form and a table of existing tokens. At the bottom is the 'Transfer Ownership' section with a form to change the book's owner.

### Access Control List

Use the forms below to manage the access to the book. Add an user with their email or group with their name via the search field to edit their permissions. By default the table shows all users and groups that have access to the book.

Email or group name

Name/Email	Type	pRead	pWrite	pDelete	pACL
snip@irp (Owner & You)	user	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
P10-staff	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IRP	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AG_Salditt	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### API Tokens

Tokens are a powerful way to authenticate with the system, especially in cases where you don't want to manually log in every time. This feature is particularly useful for automated insertion of snippets, as it allows you to upload code to your book programmatically. Each token is associated with a specific book, and can only be created with the pACL permission tag set. By using tokens, you can automate workflows and streamline your development process. For more information on how to use tokens effectively, see the TODO section in our documentation.

Description

Description	Created at	Created by	
spec_user@GINIX, 2023-06-05	Mon Jun 05 2023	snip@irp	<input type="button" value="Delete"/>

### Transfer Ownership

Use the form below to transfer the ownership of this book to another user or a group. Attention this might remove your permissions to this book!

Email or group name

← Back

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# Snip - Examples (6)

```
1 {
2   "type": "array",
3   "data": {
4     "type": "array",
5     "snips": [{
6       "type": "uprp/spec/timestamp",
7       "data": {
8         "epoch": 1687857636.88979,
9         "text": "Tue Jun 27 11:20:36 2023"
10      },
11      "view": {
12        "font": "Courier New",
13        "size": 12,
14        "wrap": 800,
15        "y": 0
16      }
17    },
18    {
19      "type": "uprp/spec/motors",
20      "data": {
21        "motors": [{
22          "name": "stx",
23          "limit_min": -5.9301,
24          "value": 99.07,
25          "limit_max": 200.0699,
26          "raw_limit_min": 140.6284,
27          "raw_value": 35.6283,
28          "raw_limit_max": -65.3716,
29          "unit": ""
30        },
31        { },
32        { }
33      ],
34      "show": ""
35    },
36    {
37      "type": "uprp/spec/motors",
38      "data": {
39        "motors": [{
40          "name": "stx",
41          "limit_min": -5.9301,
42          "value": 99.07,
43          "limit_max": 200.0699,
44          "raw_limit_min": 140.6284,
45          "raw_value": 35.6283,
46          "raw_limit_max": -65.3716,
47          "unit": ""
48        },
49        { },
50        { }
51      ],
52      "show": ""
53    },
54    {
55      "type": "uprp/spec/motors",
56      "data": {
57        "motors": [{
58          "name": "stx",
59          "limit_min": -5.9301,
60          "value": 99.07,
61          "limit_max": 200.0699,
62          "raw_limit_min": 140.6284,
63          "raw_value": 35.6283,
64          "raw_limit_max": -65.3716,
65          "unit": ""
66        },
67        { },
68        { }
69      ],
70      "show": ""
71    }
72  ],
73  "legacy": true
74 },
75 "view": {}
76 }
```

## JSON API

### Third party software:

- ▶ create JSON encoded snips
- ▶ POST to http endpoint
- ▶ with bearer token for authorization

### User:

- ▶ pick up the snip,
- ▶ place it onto the page,
- ▶ annotate





# snip: current status / plans

Feature	Status
live update, working collaboratively	yes (since Nov 2020)
free-form input; pen entry, sketches; images	yes (since Nov 2020)
machine-readable data, data ingestion via API	yes
permissions (r/w; API token; r/o token)	yes





# snip: current status / plans

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machine-readable data, data ingestion via API	<b>yes</b>
permissions (r/w; API token; r/o token)	<b>yes</b>
searching and filtering	<b>started</b>
tagging system (table of contents, flags)	<b>under discussion</b>
hyperlinks to external systems	<b>under discussion</b>
federated login, SSO	<b>needs more time</b>



# snip: current status / plans

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live update, working collaboratively	<b>yes</b> (since Nov 2020)
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machine-readable data, data ingestion via API	<b>yes</b>
permissions (r/w; API token; r/o token)	<b>yes</b>
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tagging system (table of contents, flags)	<b>under discussion</b>
hyperlinks to external systems	<b>under discussion</b>
federated login, SSO	<b>needs more time</b>
hiding contents	could be implemented
automatic creation of lab book / initial contents from beamtime metadata	could be implemented





Drawing a Creative Collage of  
Computer-Generated Contents  
with Real-Time Communication to  
Document Discussion and Decisions



Let's try it now!

Login: h@cker  
Pass: demoDPG



open book:  
demoDPG

<https://s.gwdg.de/Ana2cz>



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