

3 hackerspace projects

Getting things done the hacker way...

Elger “Stitch” Jonker, Eightdot, BugBlue

hack42.nl



Hack42 Arnhem

Intro

- Getting things done, creativity, knowledge
- 3 things
 - Heat: George & the dragon
 - Open: Space open heatmap
 - Communication: Tweelex



George & the dragon

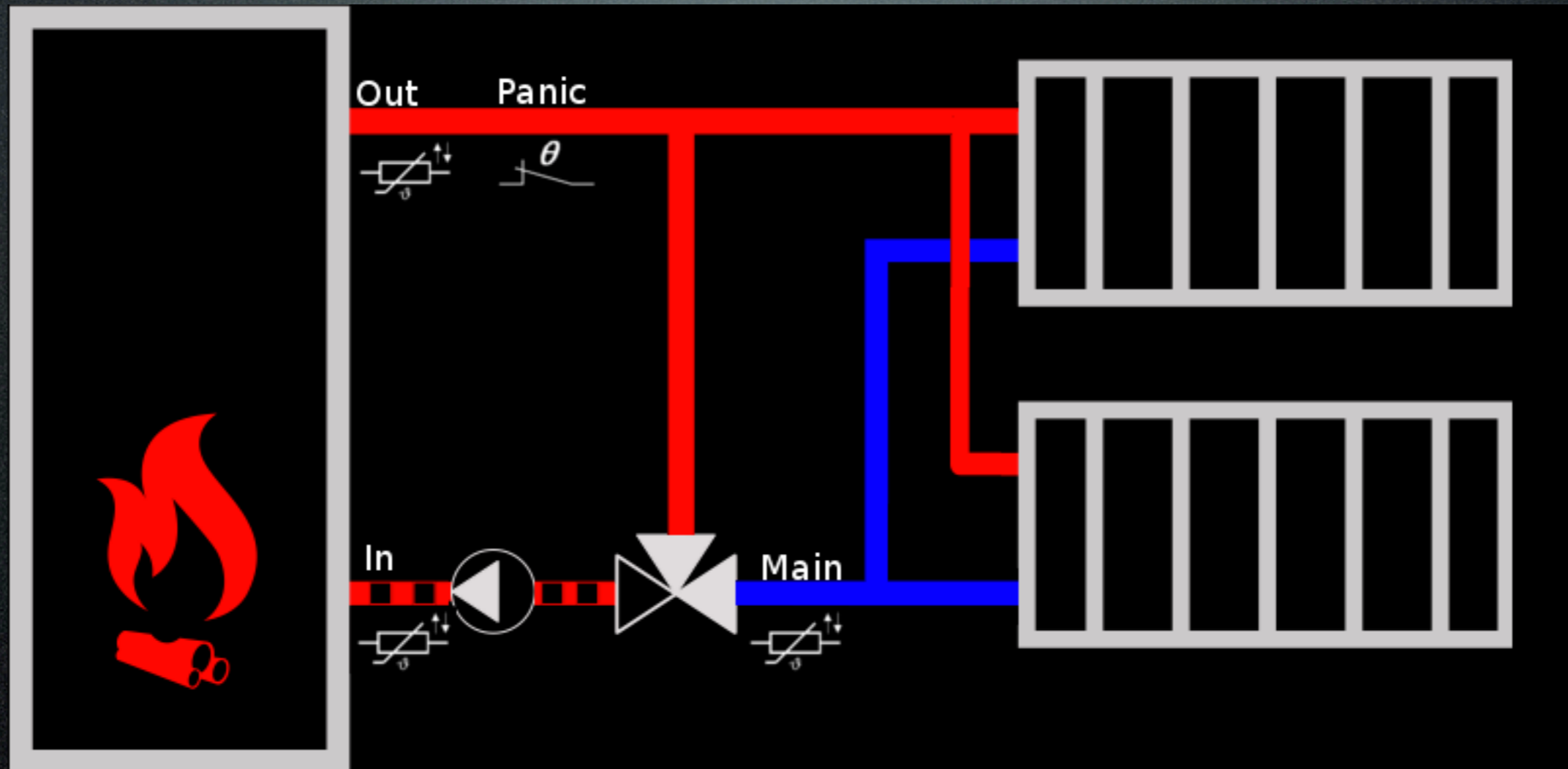
by Eightdot

Keep it warm...

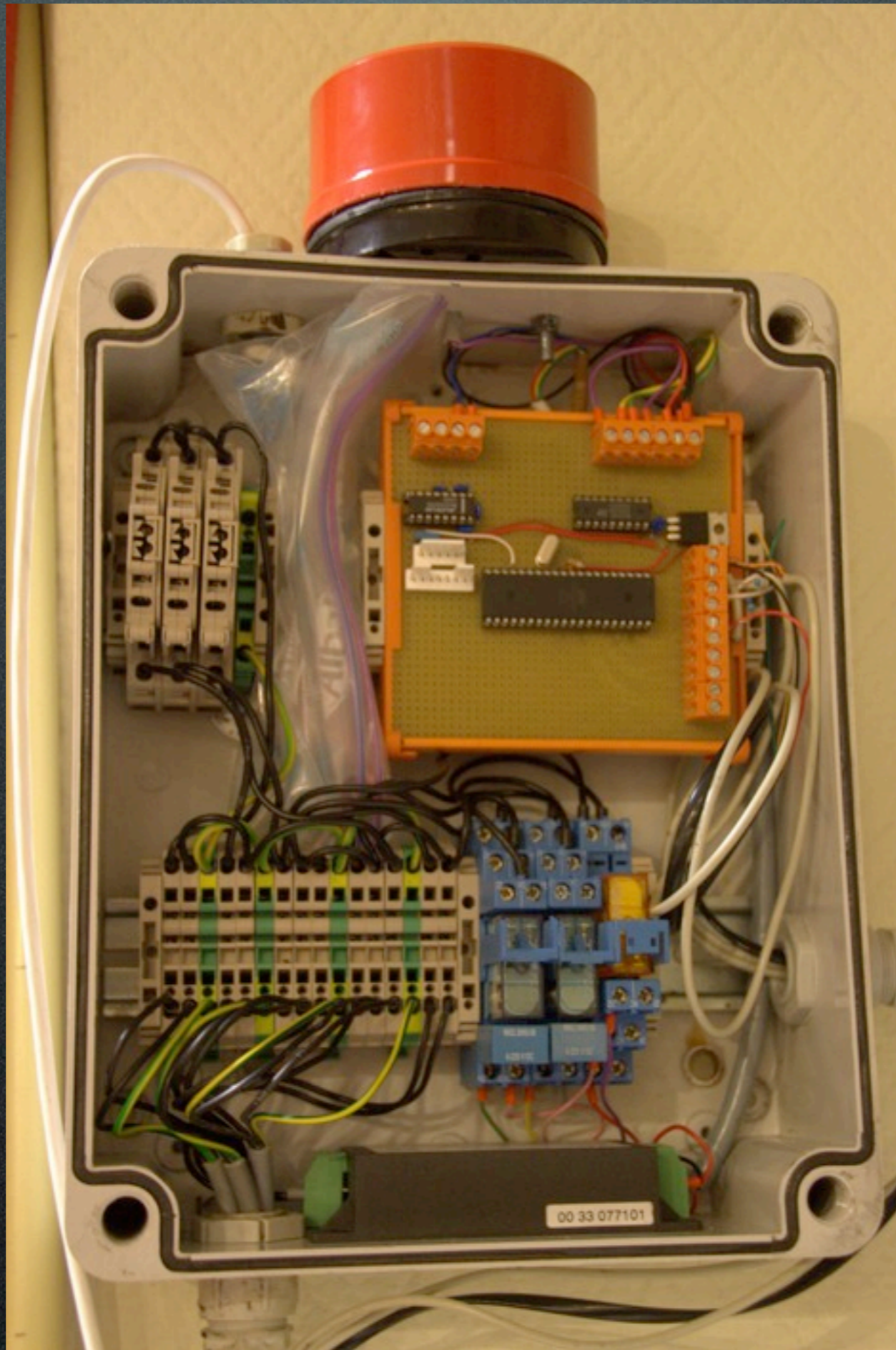
- Oil... € 10.000 / month
- Gas... Y U NO THERE
- Electricity... > 2500 / month
- ...



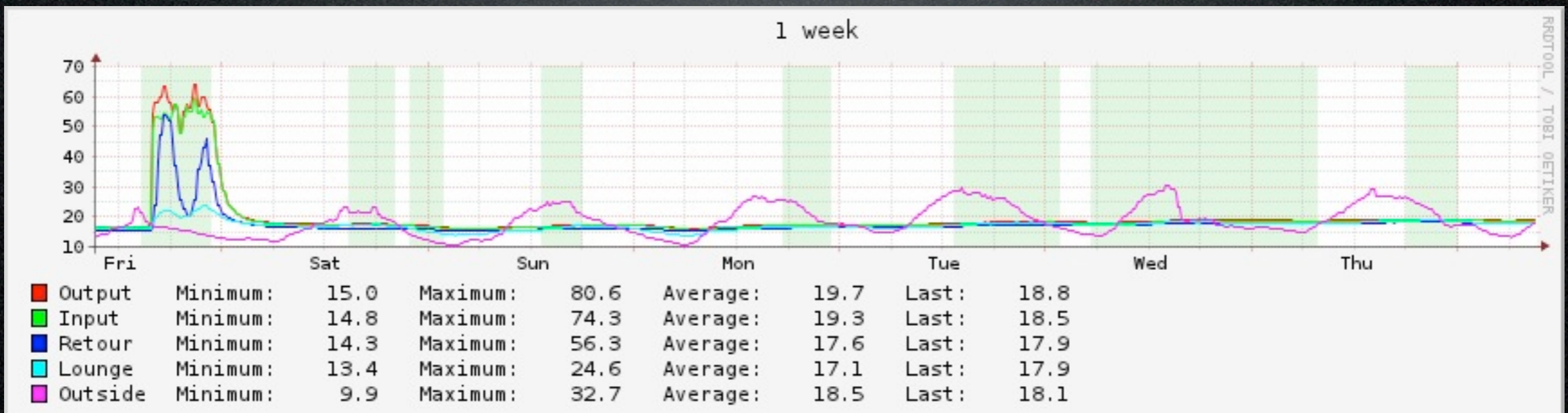
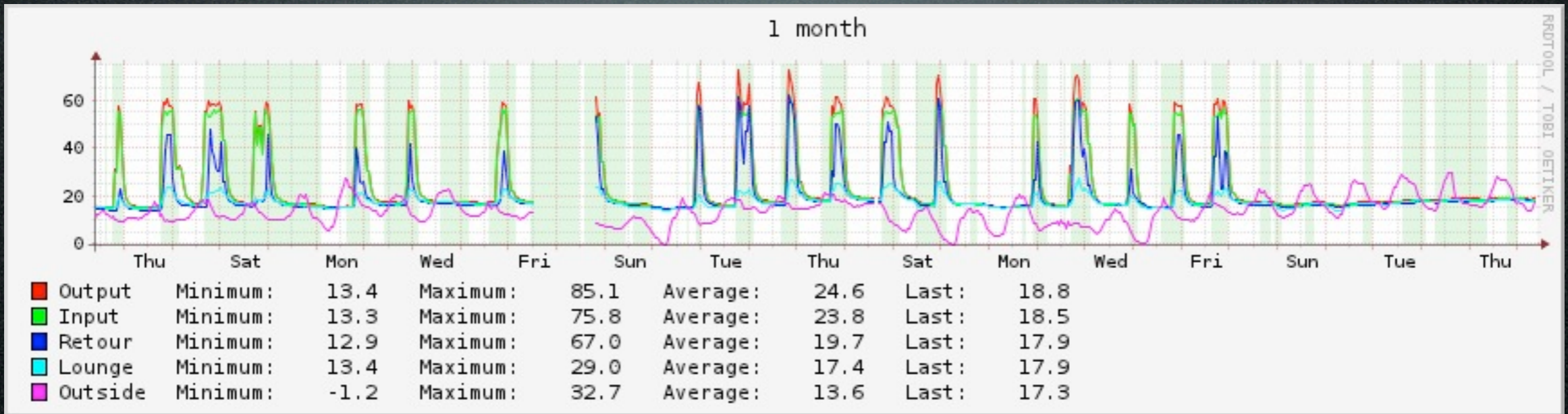




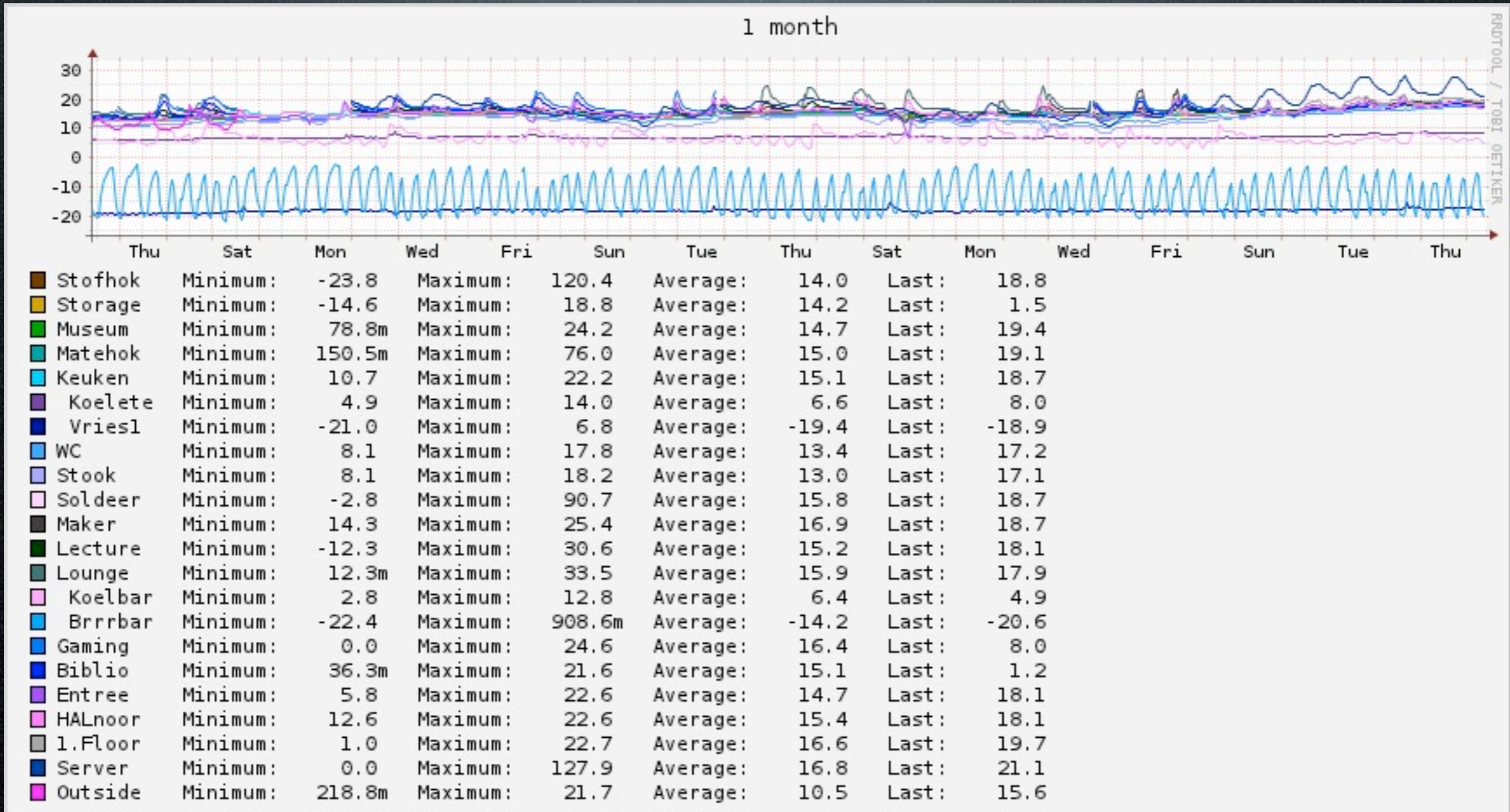
Plumbing



STATS!

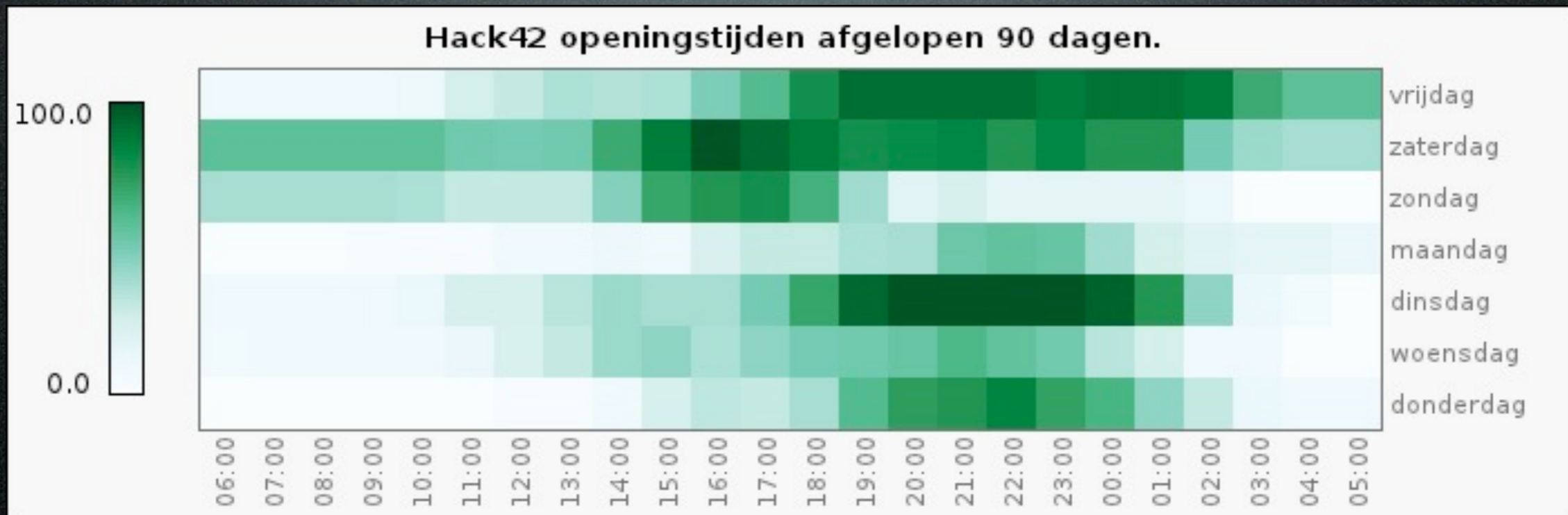


+ more stats





<https://hack42.nl/wiki/Verwarming>

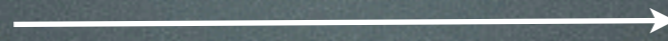


Space Open State

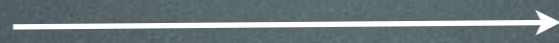
by Stitch

Spacestate Switch

SNMP link



Round Robin Database

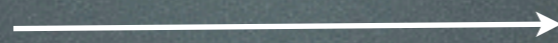


<?xml?>

```
ob_start();
$e=exec("rrdtool last ../state.rrd");
system("
    rrdtool xport --start $e-".escapeshellarg($timespan)."
--end $e --step 3600 --maxrows 4242 --enumsds \
    DEF:st=../state.rrd:state:AVERAGE \
    CDEF:open=st,1,0,IF \
    XPORT:st:\"isopen\" \
");
if($_GET["debug"]==2) die("rrdtool xport --start $e-".escapeshellarg($timespan)." --end $e --
step 3600 --maxrows 4242 --enumsds DEF:st=../state.rrd:state:AVERAGE XPORT:st:\"isopen\"");
$xml = ob_get_clean();
```

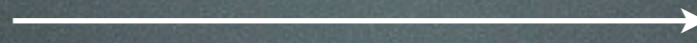
PHP

`<?xml?>`

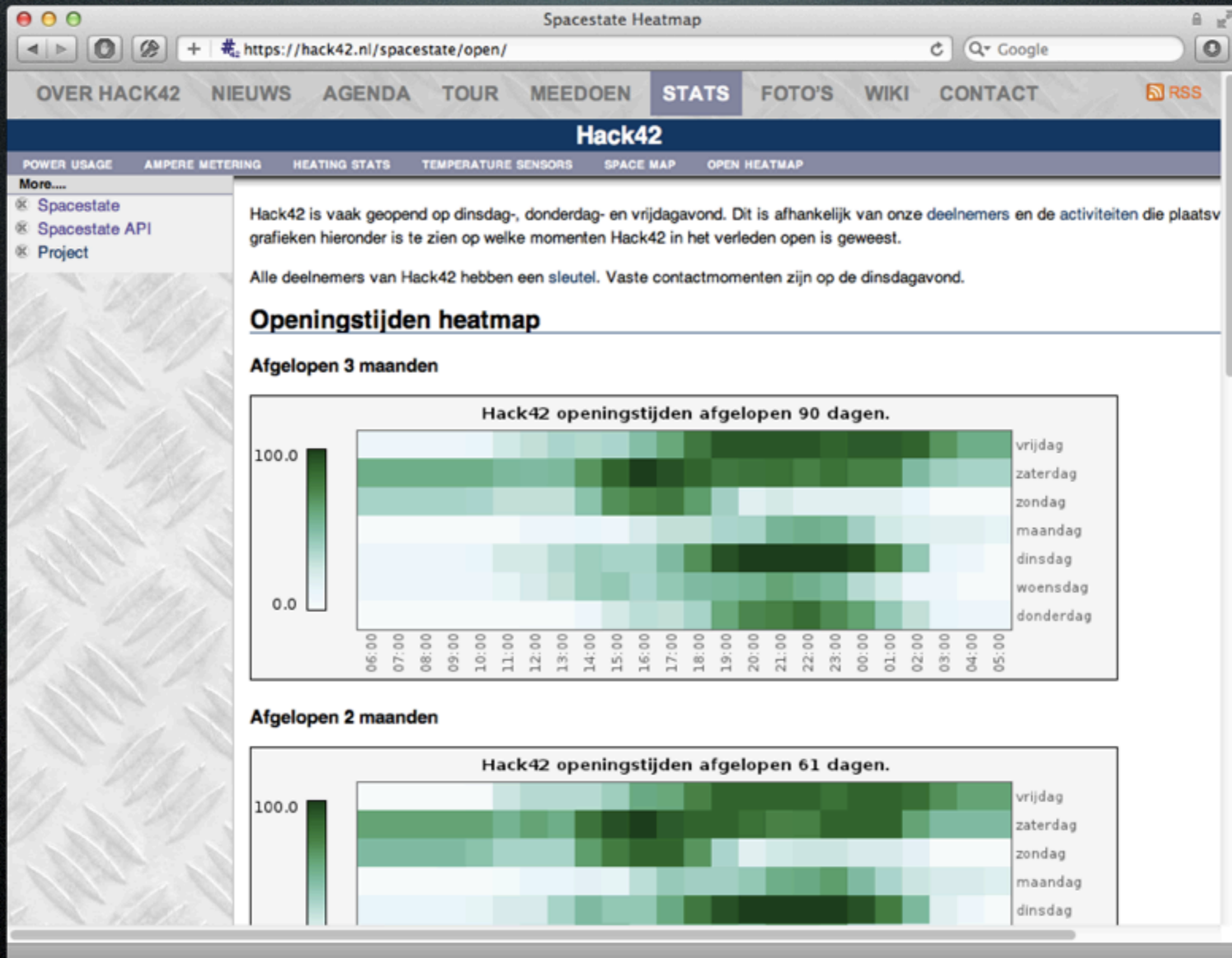


- `<row><t>1020611700</t><v>0</v></row>`
- `$dag=date("N",$row["t"]);`
- `switch ($row["t"] % 86400) {`
- `case 82800: $hourOpen[0] += $row["v0"]; break;`

jpGraph

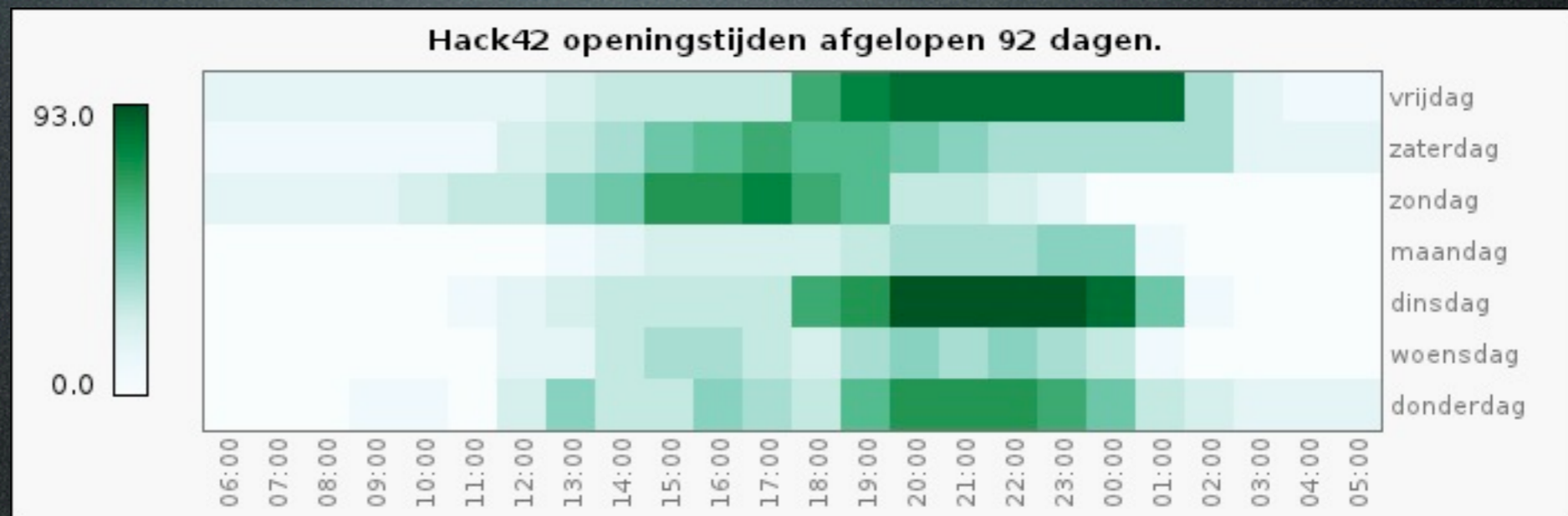


- `$matrix = timesOpenByHourInWeekRelative($measurements);`
- `$matrix = shift_matrix_backwards($matrix, 6);`
- `$mp = new MatrixPlot($data);`
- `$graph = new MatrixGraph(700,230);`

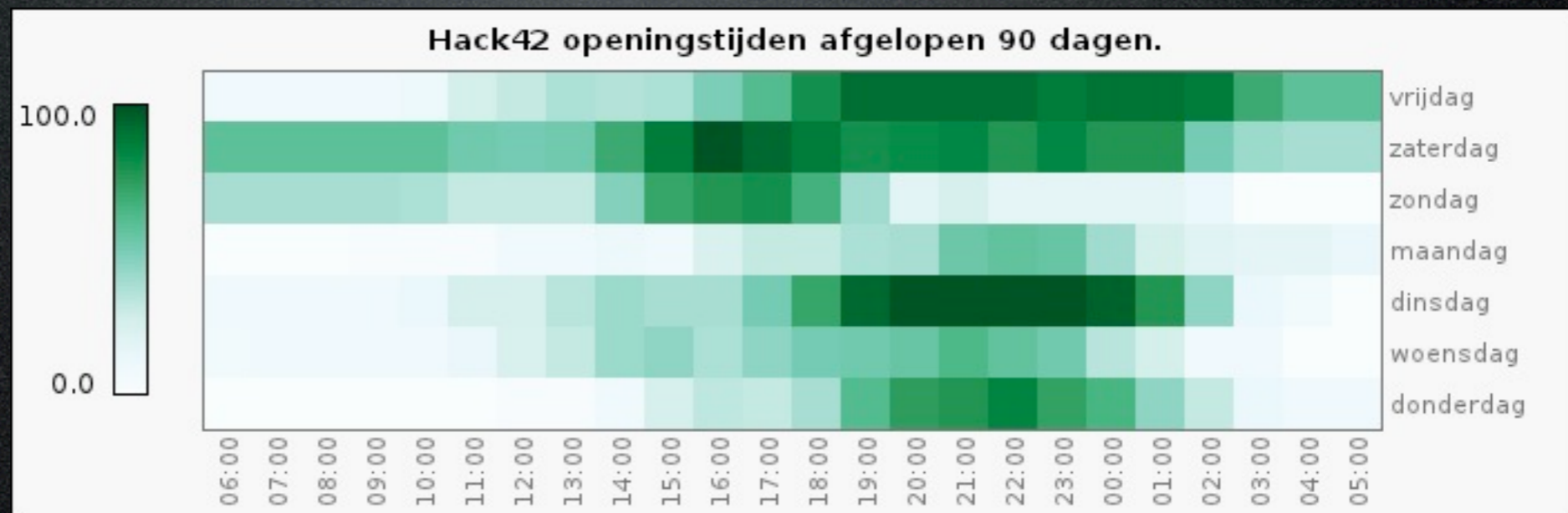


<https://hack42.nl/spacestate/open/>

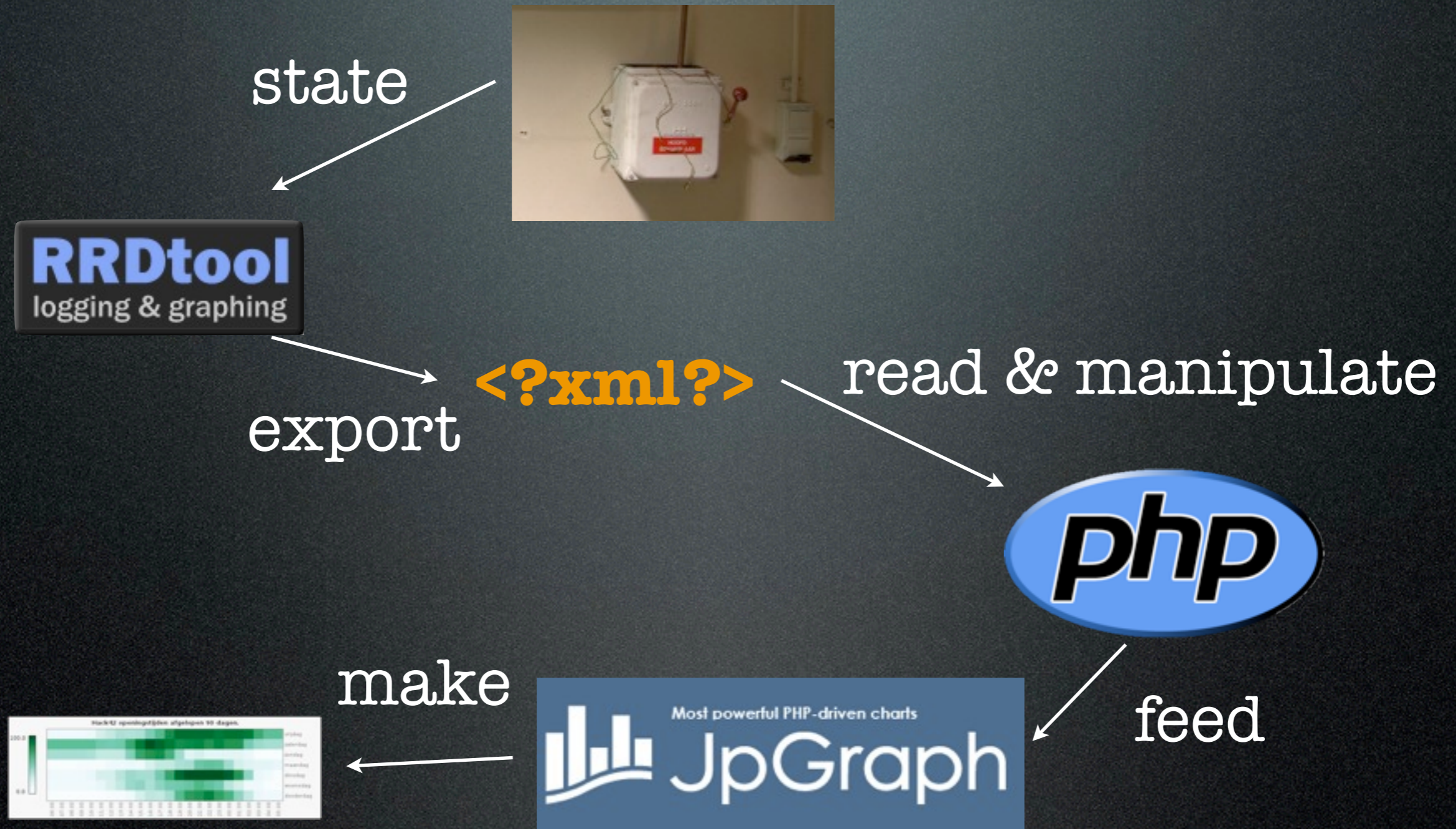
17
march



25
may



The Chain

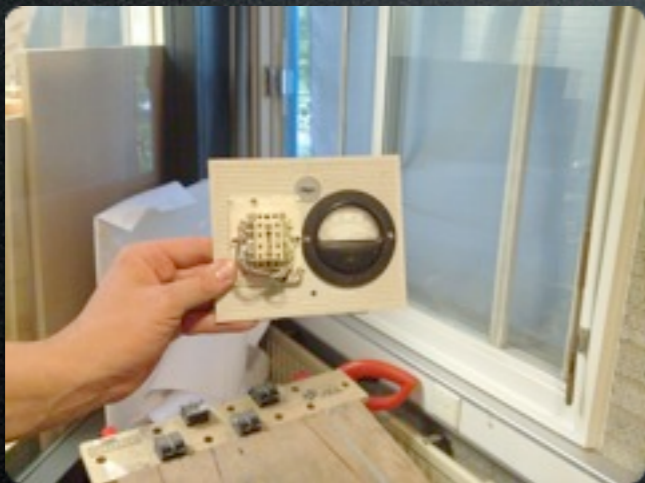
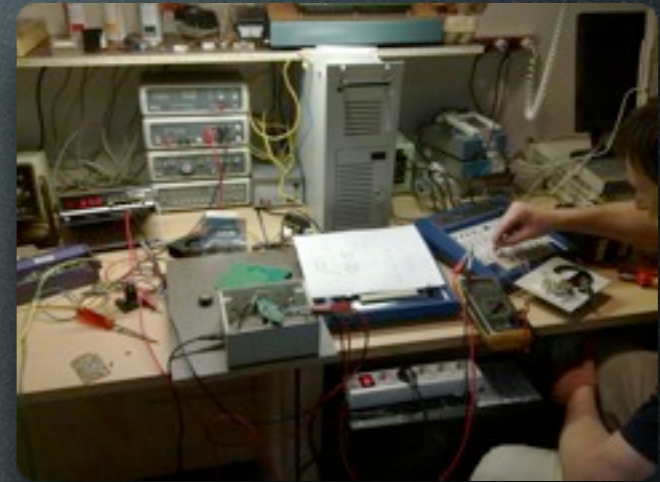
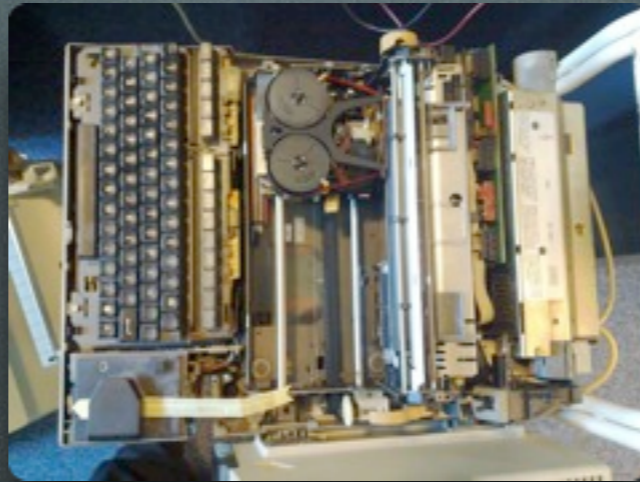


[https://hack42.nl/wiki/Gebruiker:Stitch/
OpenHeatmap](https://hack42.nl/wiki/Gebruiker:Stitch/OpenHeatmap)



Tweelex

by BugBlue

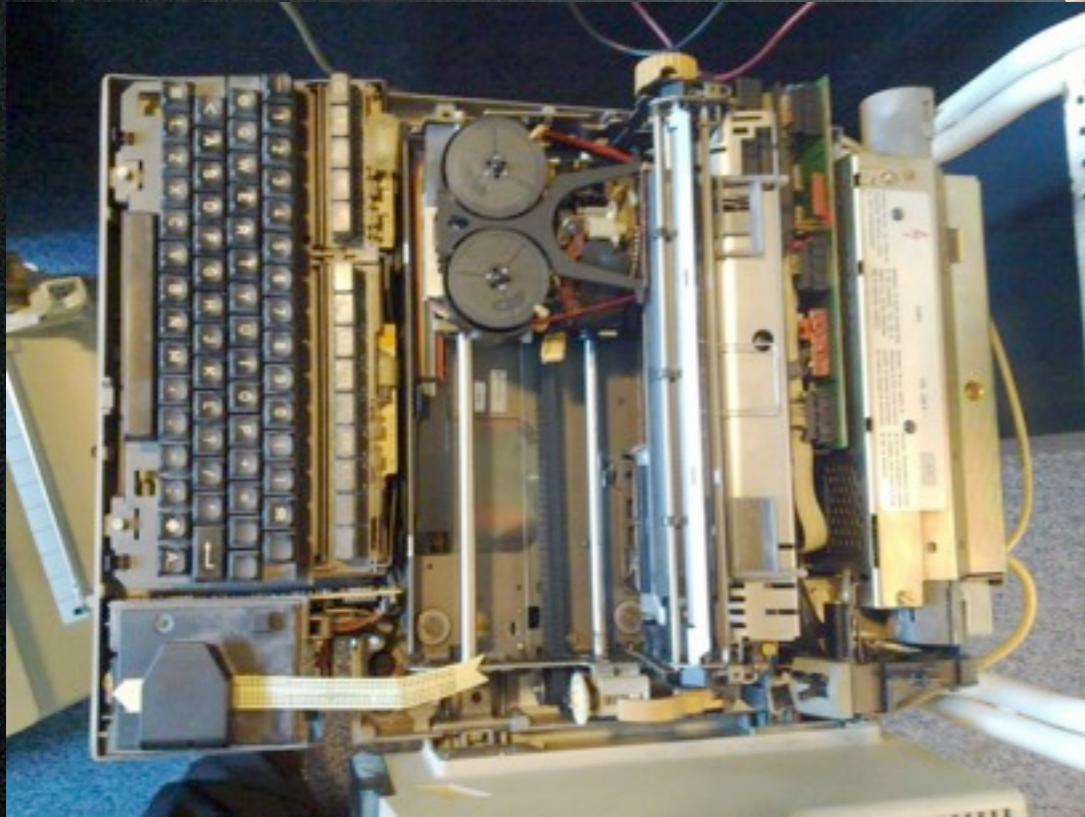


From A to Z

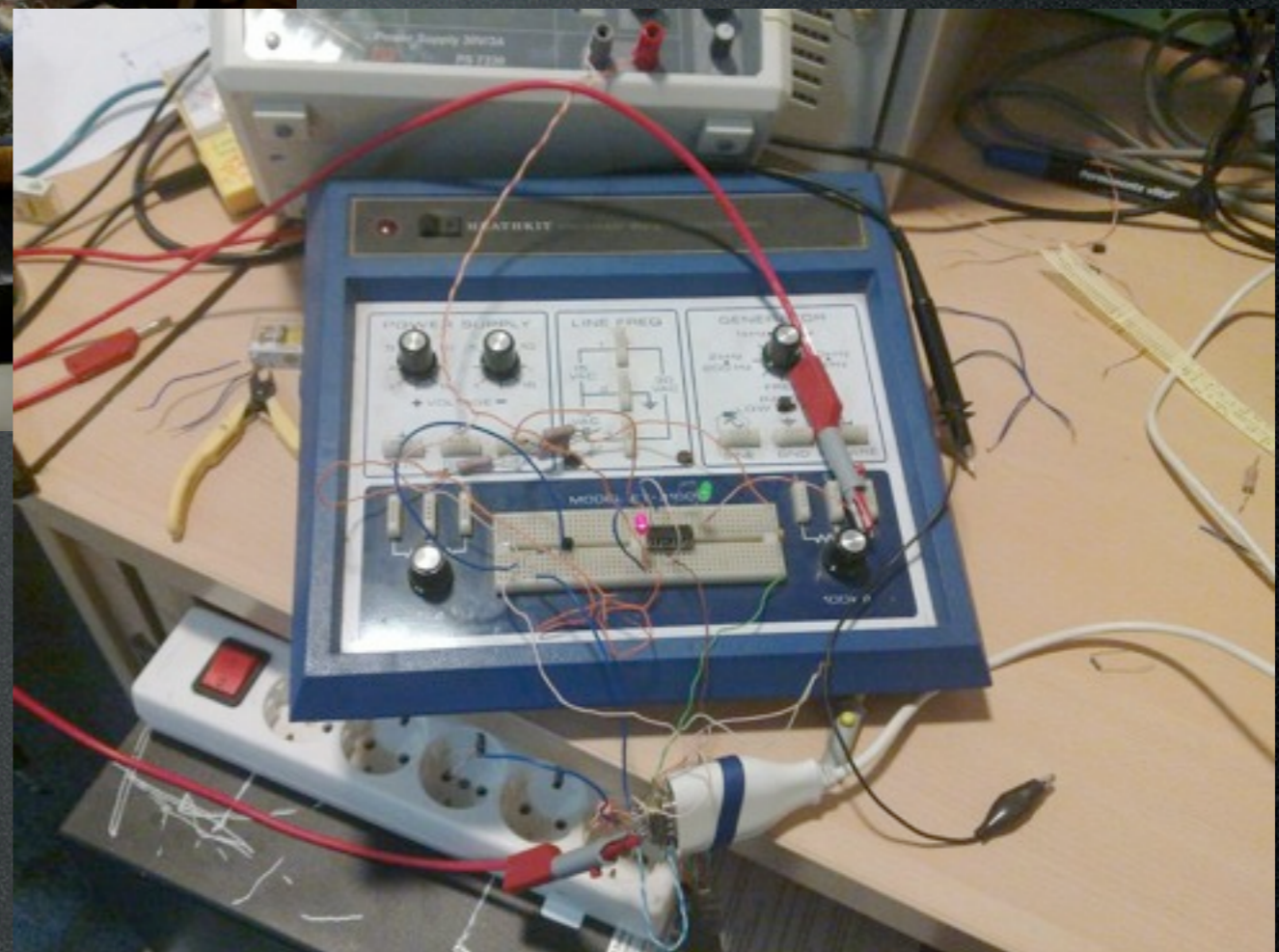
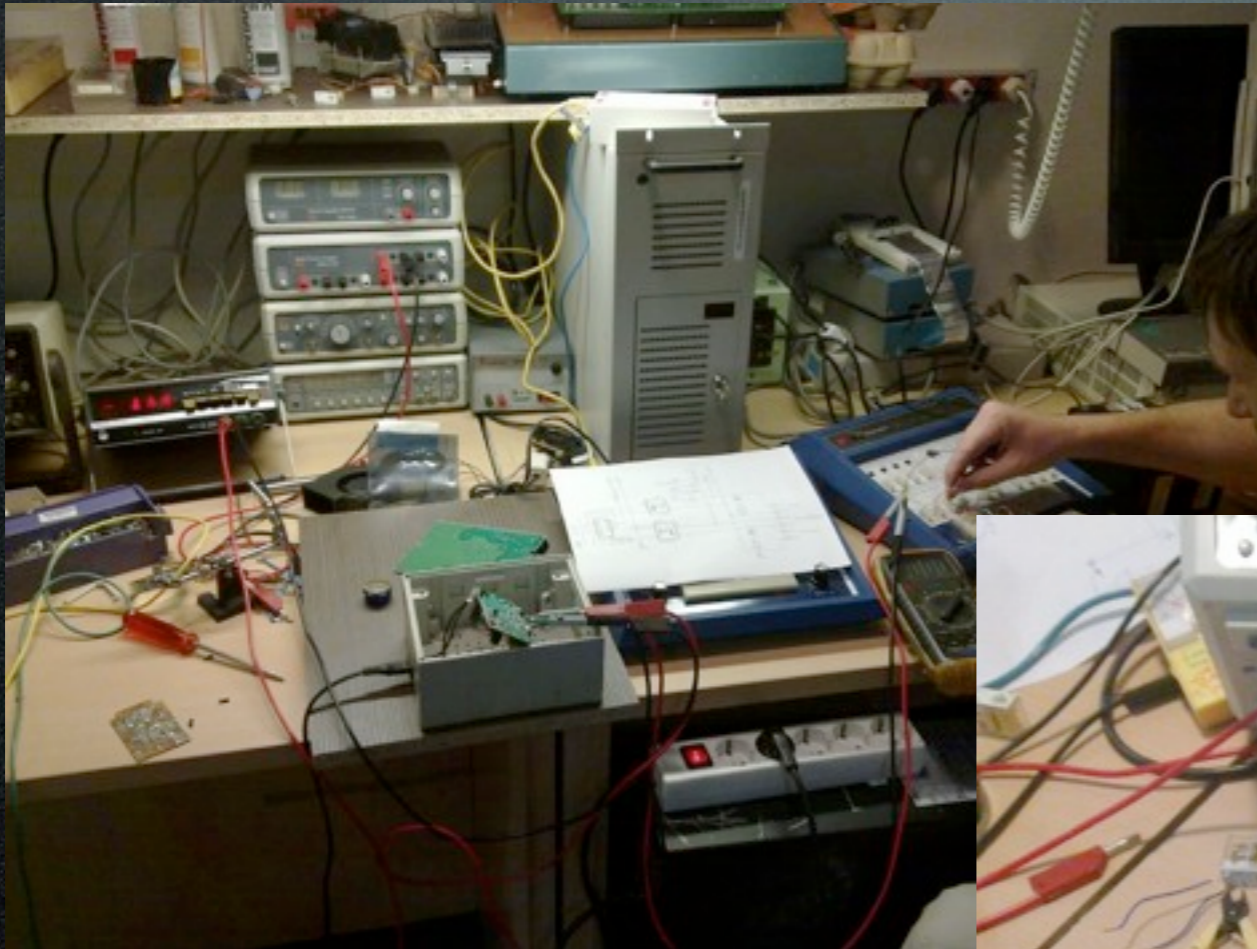
Baudot code

V	IV		I	II	III	V	IV		I	II	III	Let.	Fig.	V	IV	I	II	III	Let.	Fig.	V	IV	I	II	III
		A 1	•			•	•	P %	•	•	•	A	1			•			-	.	•		•		
•		B 8			•	•	•	Q /	•		•	E	2				•		X	9/	•			•	
•		C 9	•		•	•	•	R -			•	Y	3					•	S	7/	•				•
•		D 0	•	•	•	•		S ;			•	/	1/			•	•		Z	:	•		•	•	
		E 2		•		•		T !	•		•	I	3/				•	•	W	?	•			•	•
		E' &	•	•				U 4	•		•	U	4			•		•	T	2	•		•		•
•		F <u>f</u>		•	•	•		V '	•	•	•	O	5			•	•	•	V	1	•		•	•	•
•		G 7		•		•		W ?			•								<i>Let. Bl.</i>		•				
•		H <u>h</u>	•	•		•		X ,		•		J	6		•	•			K	(•	•	•		
		I <u>o</u>		•	•			Y 3			•	G	7		•		•		M)	•	•		•	
•		J 6	•			•		Z :	•	•		B	8		•			•	R	-	•	•			•
•	•	K (•			•		<u>t</u> .	•			H	1		•	•	•		L	=	•	•	•	•	
•	•	L =	•	•		•	•	* *		<i>Erasure</i>		F	5/		•		•	•	N	£	•	•		•	•
•	•	M)		•			•			<i>Figure Blank</i>		C	9		•	•		•	Q	/	•	•	•		•
•	•	N N°		•	•		•			<i>Letter Blank</i>		D	0		•	•	•	•	P	+	•	•	•	•	•
		O 5	•	•	•							<i>Fig. Bl.</i>			•				* *	•	•				

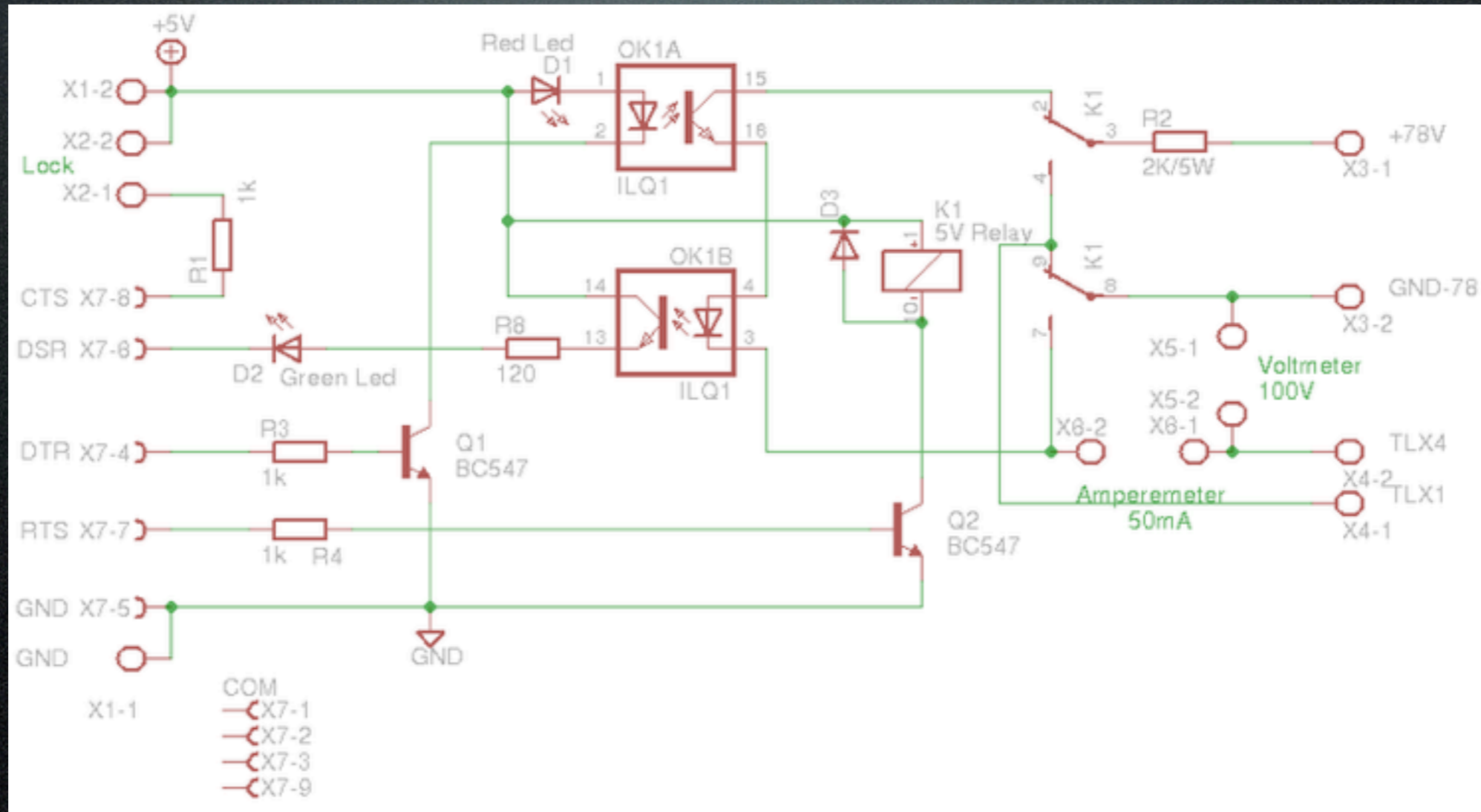
Check if it works



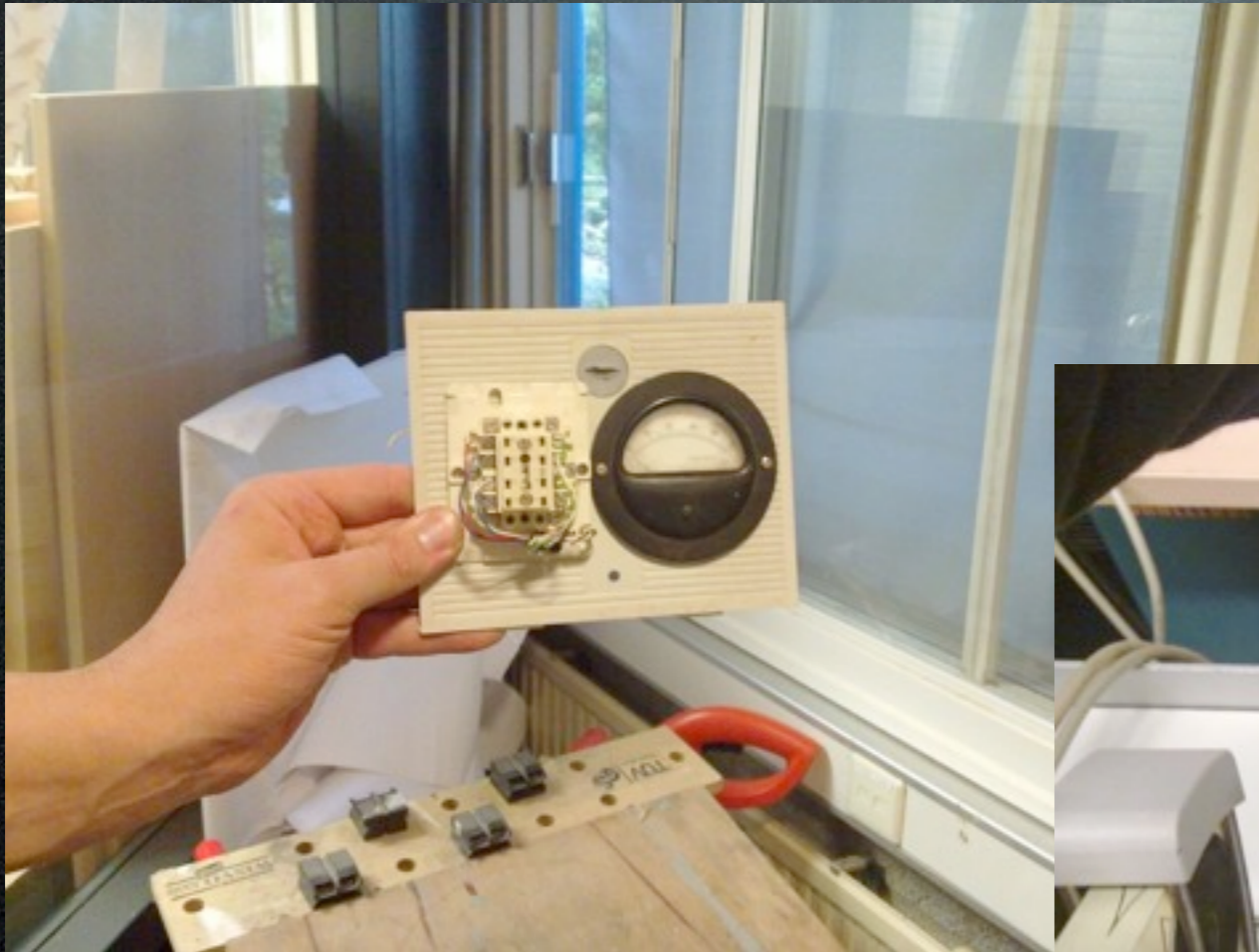
Build a circuit



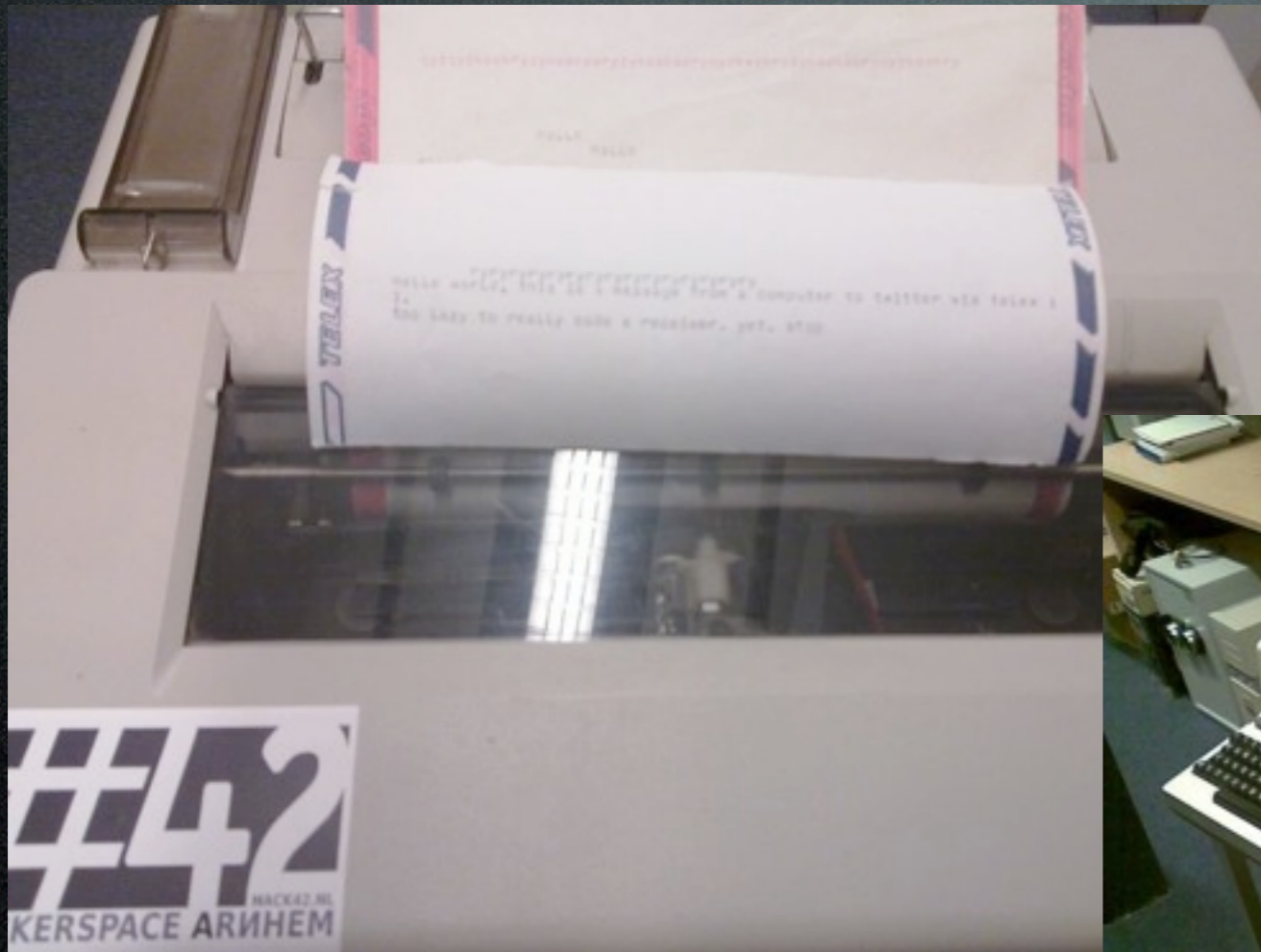
Hardware



Nice electronics box



Test & Tweet it





@fernschreiber

<https://hack42.nl/wiki/Telex>



Nice temperature



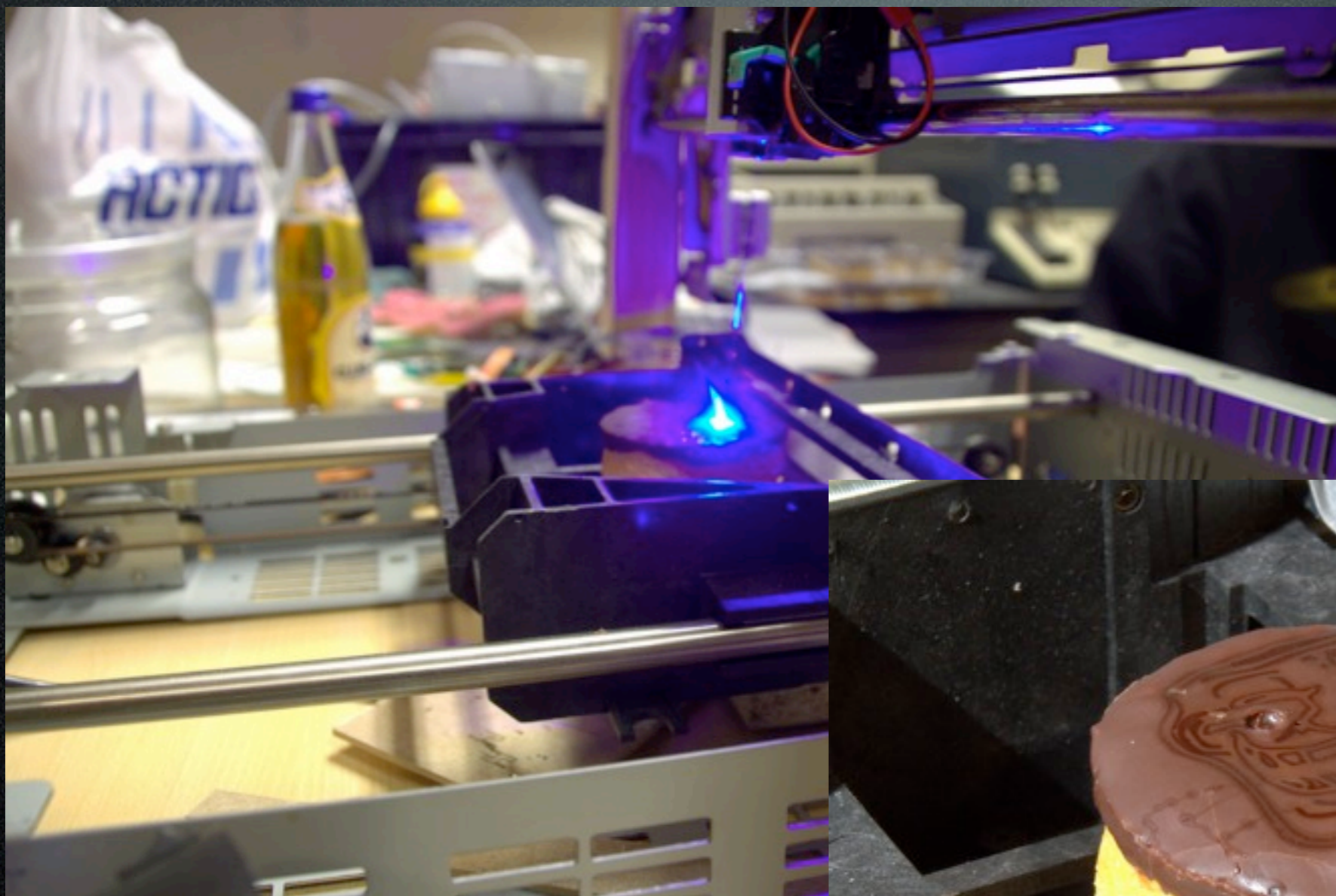
When open



Communication

Laser Engraving

by BugBlue



Orville the catcopter

by Bart Jansen



tech by ARdinges

Contact

Stichting Hack42

Koningsweg 23a

6816 TD Arnhem

The Netherlands

Speakers:

Elger “Stitch” Jonker, Eightdot, BugBlue

info@hack42.nl

<http://hack42.nl>

