



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE



E-puck workshop
Batteries management

Florian Vaussard

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The problem

E-pucks@DISAL

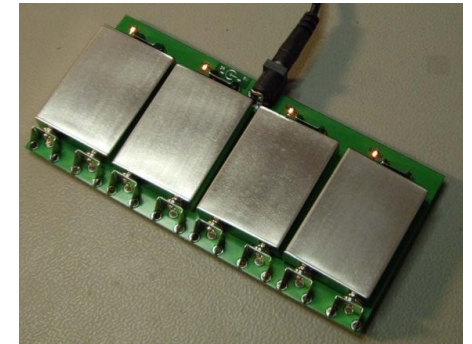
- ~100 e-pucks
- ~200 aging batteries
- Several semesters of intensive use

As a result

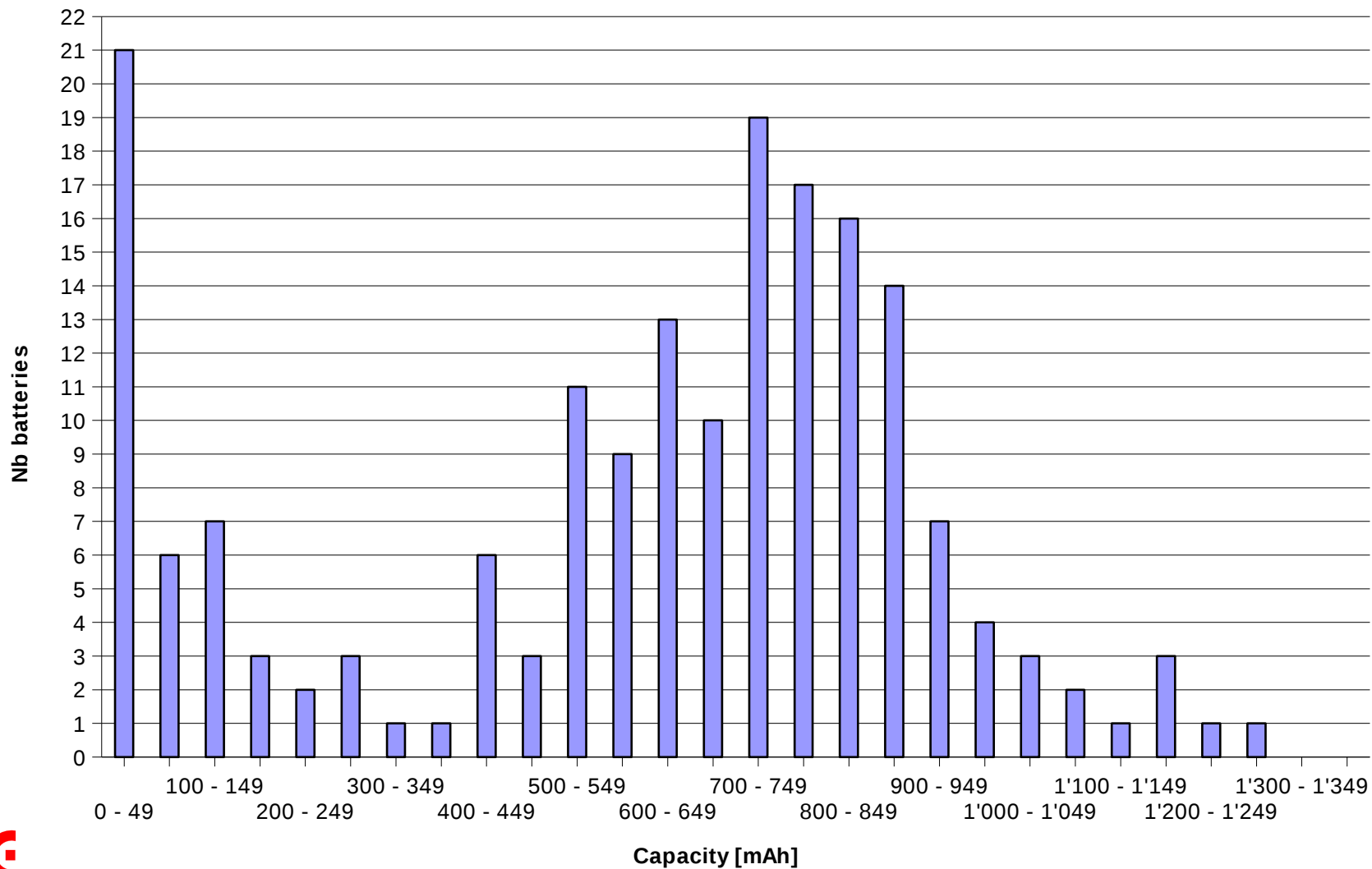
- Batteries with poor performances
- Troubles during labs

Methodology

```
1  
2 void  
3 epuck_manage_batteries (void)  
4 {  
5     for (int i = 0; i < n_batteries; i++)  
6         if capacity[i] < Threshold {  
7             throw_away (i);  
8         }  
9 }  
10  
11
```

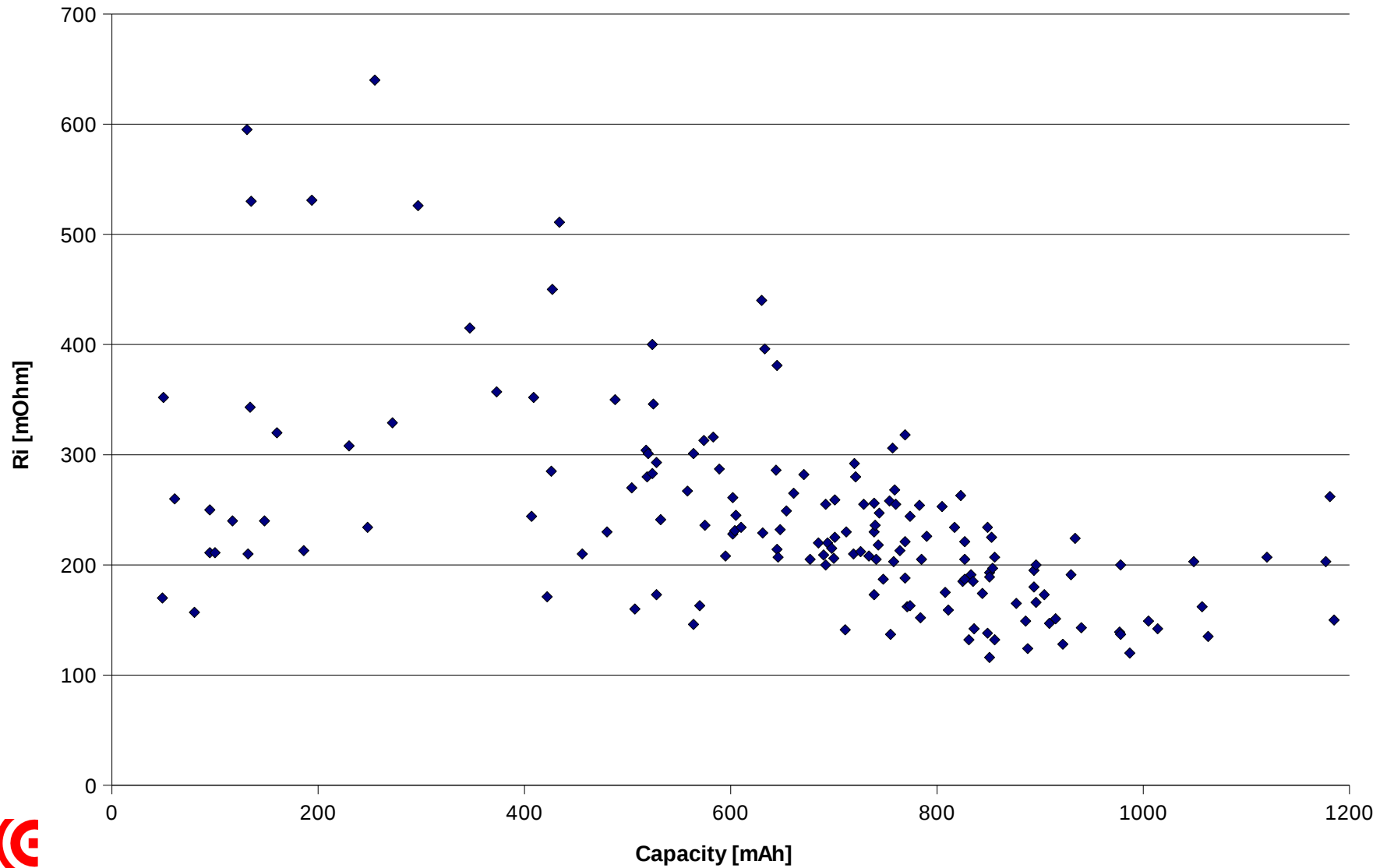


Results - Capacity



Total: 182 batteries

Results - Ri



Conclusion

As a result

- Kept 90 “good” batteries ($C > 700\text{mAh}$)
- Will be also discarded in a few semesters

Disadvantages

- Time and energy consuming
- ~4 or 5 weeks of work