ANNEX A · RELAY RACE & SYMPTOM CARDS

Print **one copy** and cut along the dashed lines. Runner cards for Block 6 (one per volunteer), symptom cards for Block 8 (one per group).

`RUNNER 1 · POWER SUPPLY (PSU)`

I turn the wall's alternating current into steady 12 V, 5 V and 3.3 V. When the voltages are stable I send **"power good"**. Until then, the CPU is held in reset.

`RUNNER 2 · FIRMWARE (UEFI)`

I live in a flash chip on the motherboard and never forget. The CPU is wired to start with my first instruction.

`RUNNER 3 · POST`

I check the CPU, the RAM, the graphics and the keyboard. If something essential is missing I cannot use the screen, so I **beep** or blink an LED.

`RUNNER 4 · BOOTLOADER`

I find the kernel on the disk, copy it into RAM and jump to it. On Linux I am **GRUB**; on Windows, **Windows Boot Manager**.

`RUNNER 5 · KERNEL`

I am the core of the operating system. I take control of the hardware, load the drivers, mount the disk and start the first process.

`RUNNER 6 · LOGIN`

Services start: network, sound… and the login screen appears. The user thinks all of this was one step.

`SYMPTOM A`

You press the power button. Nothing at all: no fans, no lights.

`SYMPTOM B`

The fans spin, the screen stays black and the PC beeps several times.

SYMPTOM C

The maker's logo appears, then: "No bootable device found".

SYMPTOM D

A black screen with only the text `grub>` and a blinking cursor.

SYMPTOM E

The operating system starts loading, then freezes halfway, every time, since last night's update.