COMPUTER ENGINEERING
Escuela Politécnica Superior
Universidad Autónoma De Madrid

PC Disassembly

Task 2, Part 1 (Hardware Laboratory)

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1. Introduction

This document is a brief guide about the components identified inside the computer and the disassembly / assembly process. It also includes an annex that shows a simulation of a PC assemblage.

1.1 Purpose of the Document

The goal of this document is to correctly identify the parts of a PC by assembling and disassembling it.

1.2 Document Structure

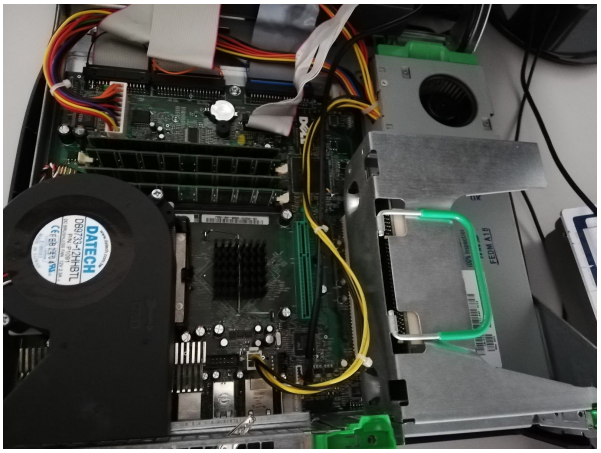
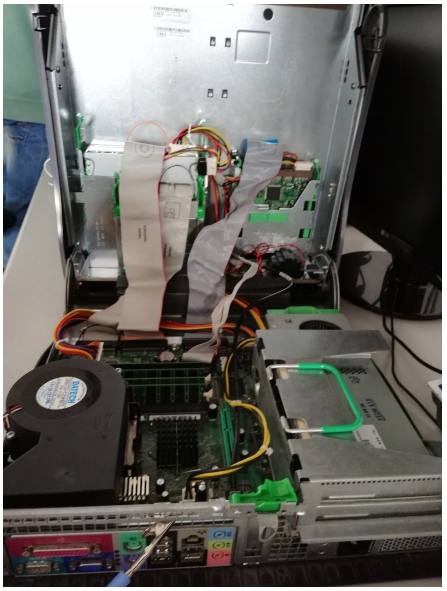
The document is composed by 3 chapters. Each chapter will contain the basic information about the topic that is declared at the title.

- **Chapter 1:** Introduction. Brief introduction about the document contents, purpose of the document and its structure.
- **Chapter 2**: the process of disassembling one of the Laboratory's PC is explained.
- **Chapter 3**: a brief simulation on how to build up a PC is showed.

1.3 Acronyms and Definitions

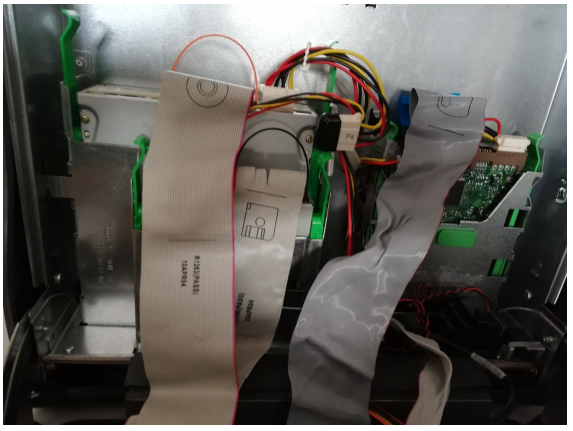
- USB Universal Serial Bus
- PCI Peripheral Component Interconnect
- DVD Digital Versatile Disc
- HDD Hard Disk Drive
- RAM Random Access Memory
- PSU Power Supply Unit
- ATX Advanced Technology eXtended
- SATA Serial Advanced Technology Attachment

2. Disassembly

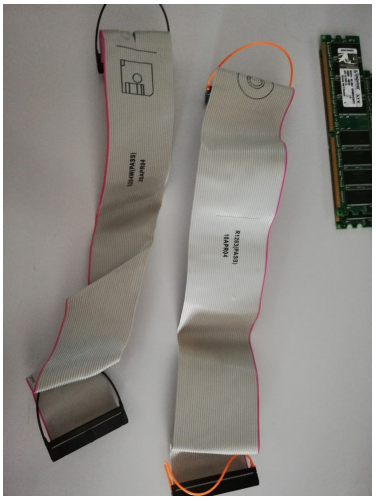



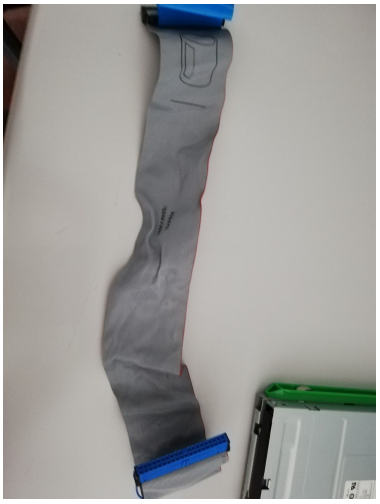
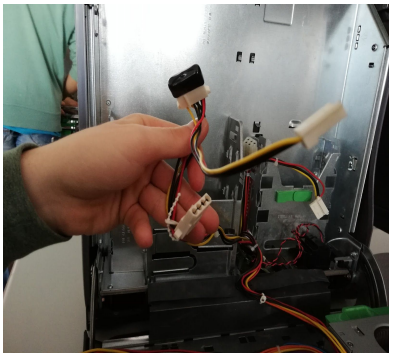
First of all, wearing an antistatic wristband, open the tower by pressing the buttons located on the sides of the case.


Then remove the four RAM memories by pushing downwards the plastic parts of the sides.

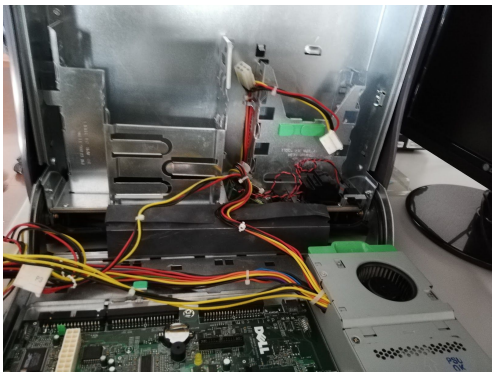
After that, remove the PCI expander by pulling it upwards and disconnect the data and power cables of the HDD, DVD-Reader and Floppy DIsk Reader.



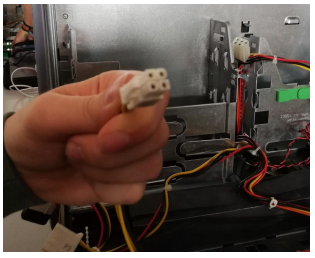
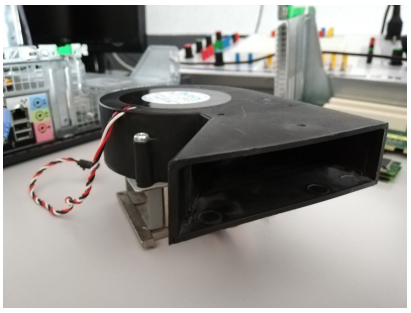





Now, remove the HDD, DVD-Reader and Floppy DIsk Reader from their slots by lifting them up.





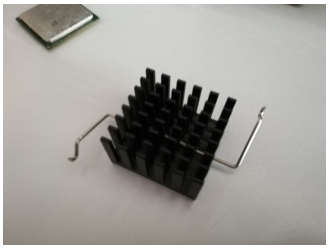
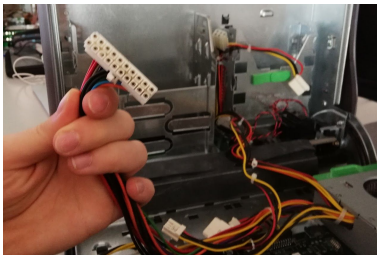
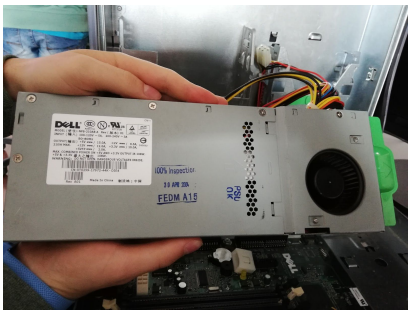
The only part that is left in the upper side of the tower is the USB and Audio hub, unplug their data and power cable, the result must be as shown in the pictures.


It is time for the processor. First of all remove the cooler power cable, which is connected to the motherboard, then disassemble it by lifting it up.



Then, unlock the socket and take off the processor, now your motherboard should look as shown in the left picture.

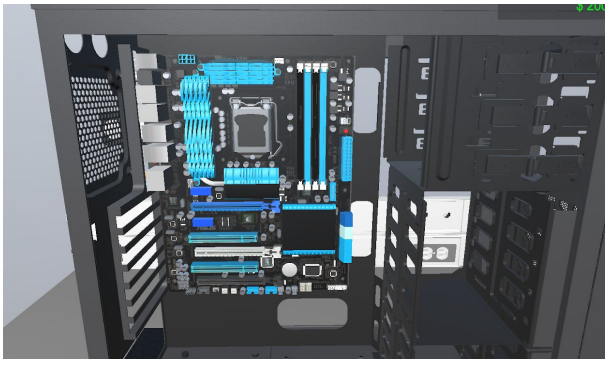




Finally, remove the cooler of the north bridge by unhooking it. We cannot forget the PSU, just by pulling from right to left we can release it from its slot.

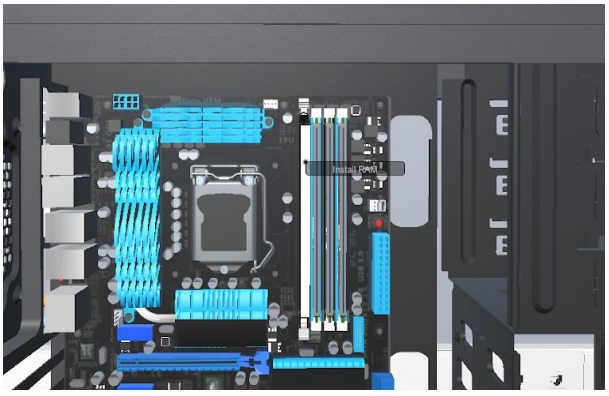

Now we can see the inputs/outputs connectors and we can release the motherboard by pulling it from right to left, as the PSU.

3. Annex

This will be a simulation on how to assemble a PC in the PC Building Simulator:



1. First off all, place the motherboard on the case.

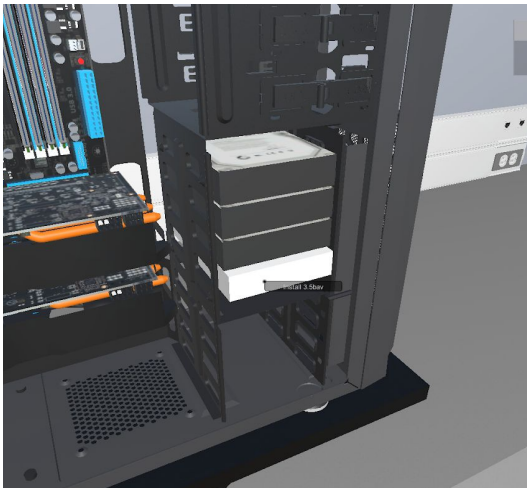


2. Now you have to insert the RAMs memories in their slots. Before inserting them you have to lift up the plastic in the both sides to be able to insert the memories.

3. It is time for the graphic cards, we must insert them in the PCI-e slots below the microprocessor.

4. Then you have to place the microprocessor in its motherboard socket (first unlock the socket by clicking on it, then place the microprocessor, after that secure it by clicking again).

5. After the microprocessor is well secured, you have to put some thermal paste on it and place its fan above.



6. Now it is time for the disks, fit them in their reserved slots.

7. Now you just have to install the PSU below the graphic cards.

8. Finally it is necessary powering up everything by connecting all the necessary cables. First connect the 6 and 8 pin PCI-E on the graphic cards.

9. Then connect 20/24 pins ATX cable to the motherboard, it will power up the motherboard.

10. Now connect the EPS12V cable also to the motherboard, this cable will power the microprocessor.

11. Connect the power cable of the microprocessor's fan cooler to the motherboard.

12. Now it is time to connect the HDDs to the motherboard with SATA cables and power them with SATA power cables.

13. Place the simple fans in the cooling sides and power them with the fan cable connected to the motherboard.

14. Unlock the slot of the DVD, that allow us to properly insert the DVD.

15. Insert the DVD in the front slot.

16. Connect the Molex and SATA cables to the DVD. The Molex cable will power it and the SATA cable is in charge of transfer the data between the DVD-Reader and the motherboard.

17. The final result must be as shown in the pictures.

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