IoT challenges

State of the art

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Outline

Context

What is IoT ?

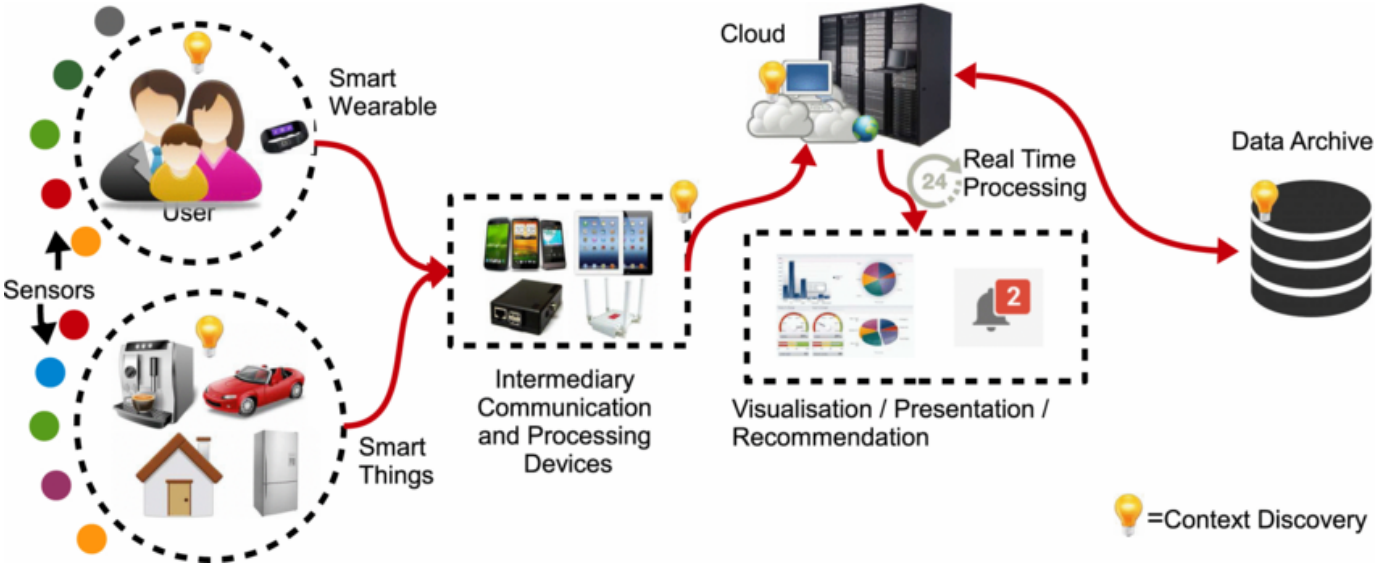

Figure 1: IoT platform.

Figure 2: IoT challenges.

Problematic

Where is the problem ?

1. How to Connect sensors to the best gateway with high QoS [1].
   - Decision and optimisation problem.
   - Various network acces
   - Various configuration of each network acces
   - Lake of selection tools
2. How to connect sensors to this gateway with high Security level.
   - Technical problem.
   - Lake of selective tools
   - How to select the **best** access point
3. How to extract knowledge from sensors data [2].
   - a
   - Lake of selective tools
   - How to select the **best** access point

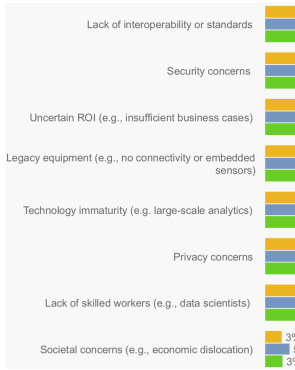

Figure 3: Key b
Industr

[a] **industrialinternetofthings**

[1] Musa Ndiaye, Gerhard Hancke, and Adnan Abu-Mahfouz. " Software Defined Networking for Improved Wireless Sensor Network Management: A Survey ". In: 17.5 (May 4, 2017). 00053, p. 1031.

[2] Pascal Thubert, Maria Rita Palattella, and Thomas Engel. " 6TiSCH Centralized Scheduling: When SDN Meet IoT ". In: *2015 IEEE Conference on Standards for Communications and Networking (CSCN)*. 2015 IEEE Conference on Standards for Communications and Networking (CSCN). 00033. Tokyo, Japan: Oct. 2015, pp. 42–47.

Problematic

Where is the problem [3] ?

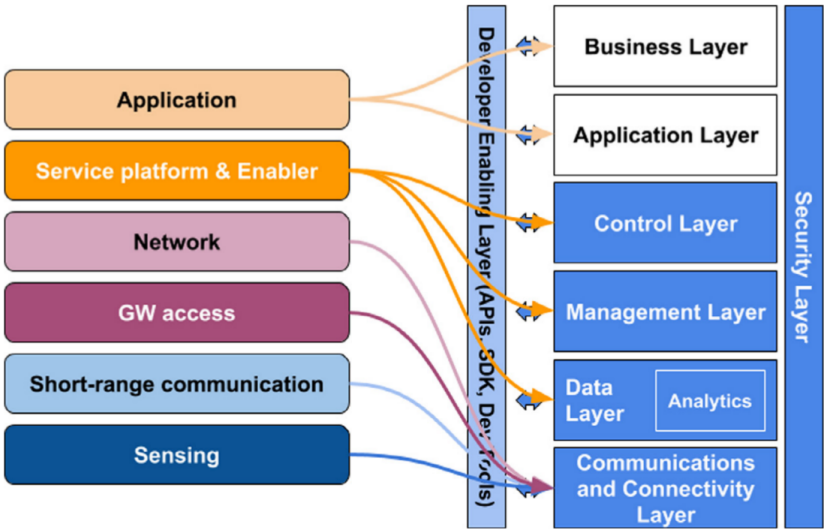

Figure 4: Intel view.

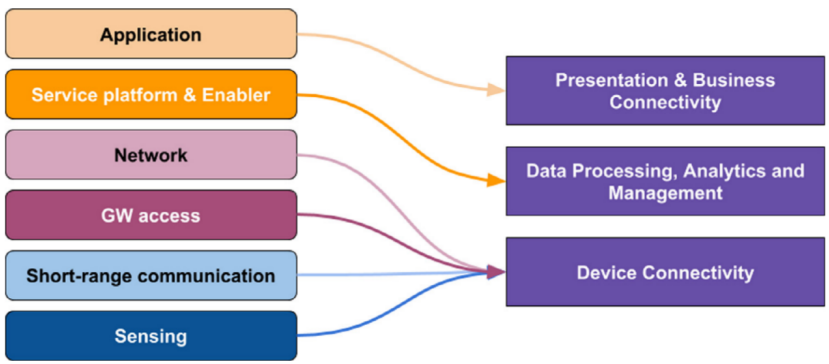

Figure 5: Microsoft view.

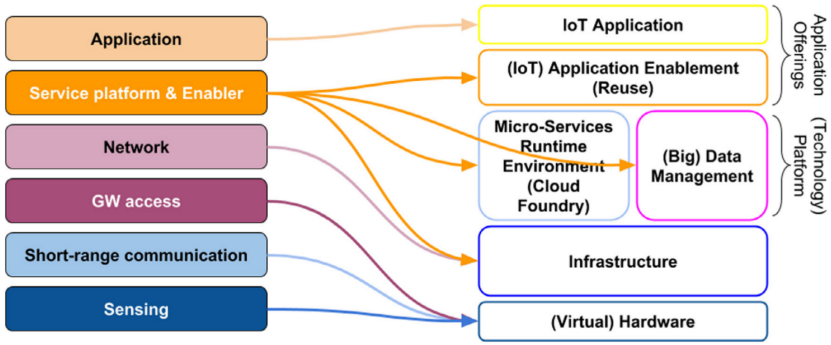

Figure 6: SAP view.

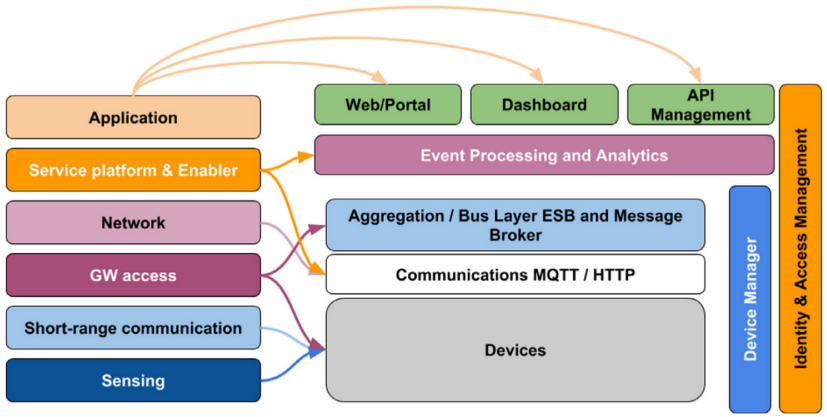

Figure 7: WS2O view.

Problematic

Where is the problem [3] ?

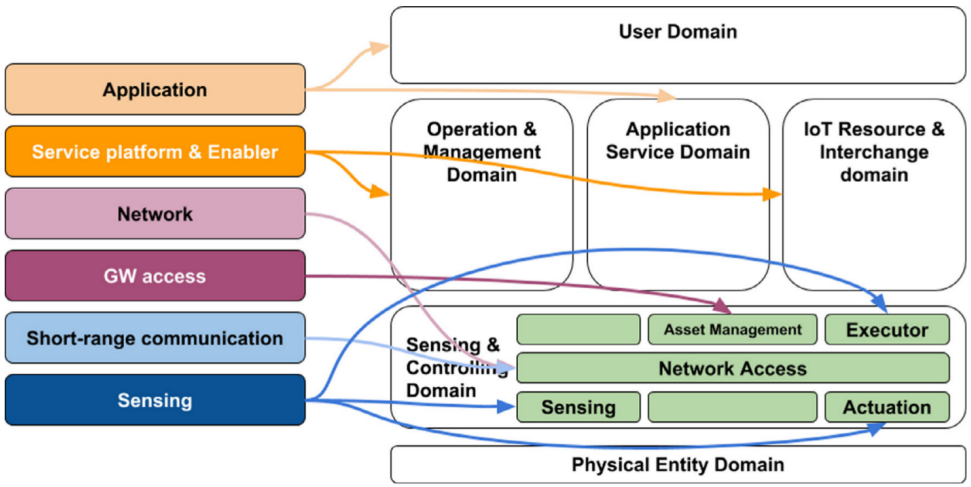

Figure 8: ISO view.

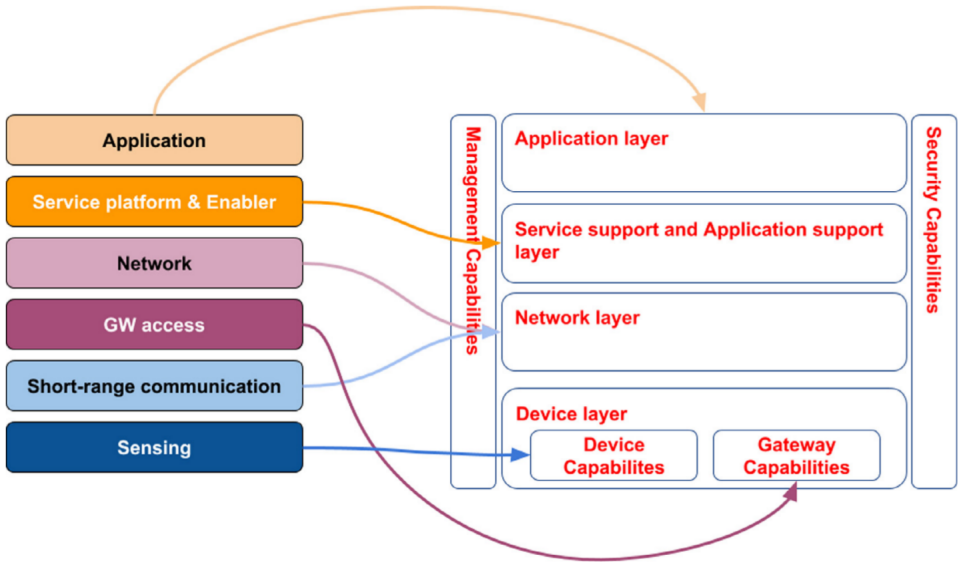

Figure 9: ITU-T view.

Motivations

Why should we deal with seach problems

1.
   - a
   - Lake of selective tools
   - How to select the **best** access point
2. QoS Analysis
   - a
   - Lake of selective tools
   - How to select the **best** access point
3. Threats
   - a
   - Lake of selective tools
   - How to select the **best** access point

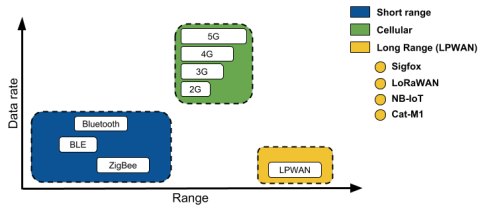

Figure 10: Communication diversity.

Goal

Is it specific, measurable, achievable, réalistic, for 3 years ?

- 1. Allow heterogeneous network to communicate
  2. QoS Analysis
  3. Threats
- How to select the **best** access point
  1. Allow heterogeneous network to communicate
  2. QoS Analysis
  3. Threats

Figure 11: wsn-IoT.

Challenges

Where is the difficulty ?

1. Challenge 1
   - a
   - Lake of selective tools
   - How to select the **best** access point
2. Challenge 2
   - a
   - Lake of selective tools
   - How to select the **best** access point
3. Challenge 3
   - a
   - Lake of selective tools
   - How to select the **best** access point

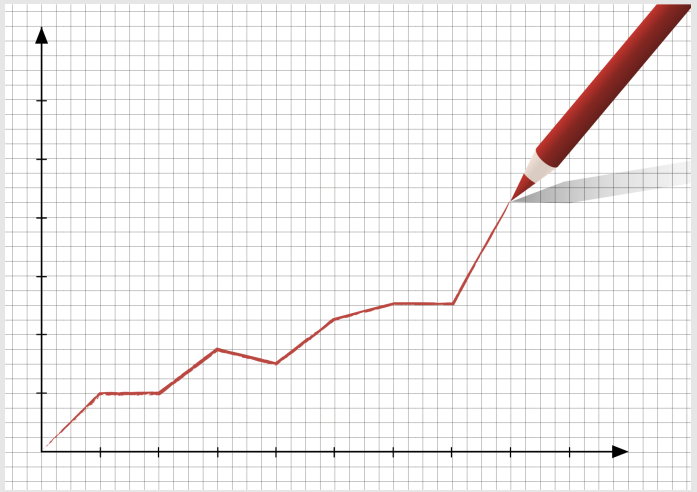

Figure 12: tets.

Contributions

How could be addressed ?

1. Contribution 1
   - a
   - Lake of selective tools
   - How to select the **best** access point
2. Contribution 2
   - a
   - Lake of selective tools
   - How to select the **best** access point
3. Contribution 3
   - a
   - Lake of selective tools
   - How to select the **best** access point

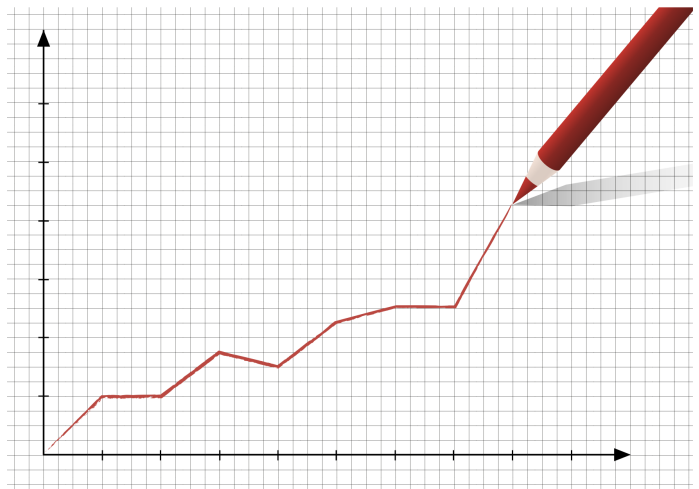

Figure 13: tets.

Outline

Outline

Outline

Related work

Comparison

Paper	A1	A2	A3	A4

Table 1: An example table.

Related work

Comparison

Paper	A1	A2	A3	A4

Table 2: An example table.

Outline

... (step 1)

Methods

... (step 2)

Methods

... (step 3)

Methods

... (step 4)

Methods

Results

Comparison

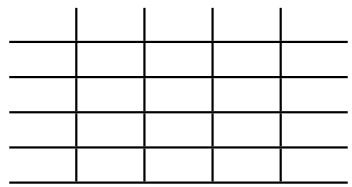

Table 3

Outline

Experimentation

Experimentation

- a
- b

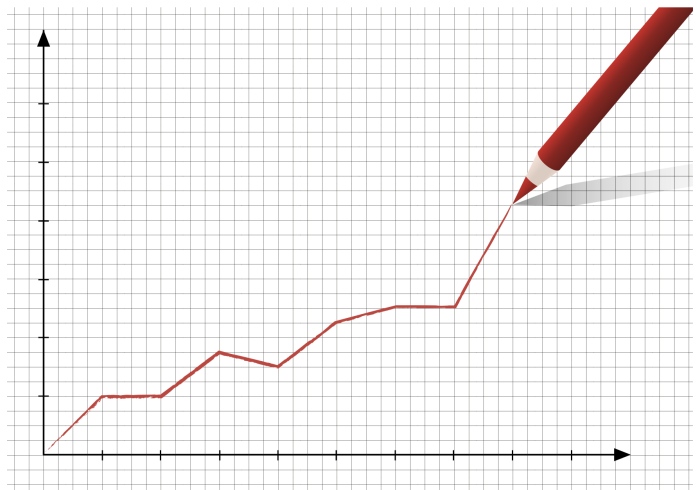

Figure 14: .

Outline

Results

Comparison

- a
- b

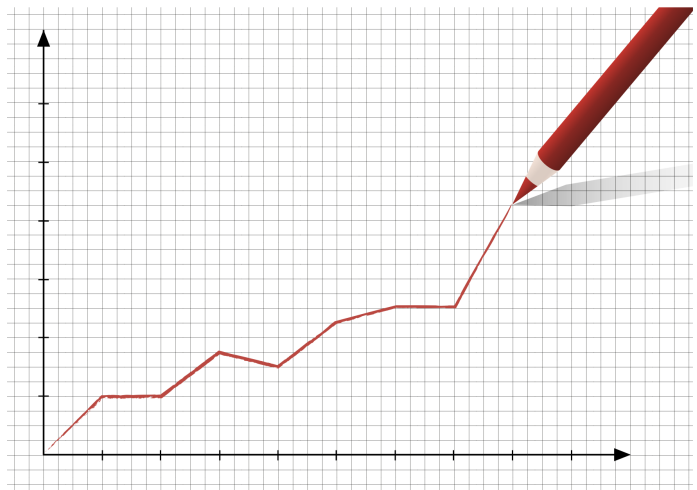

Figure 15: .

Outline

Conclusion

- a
- b

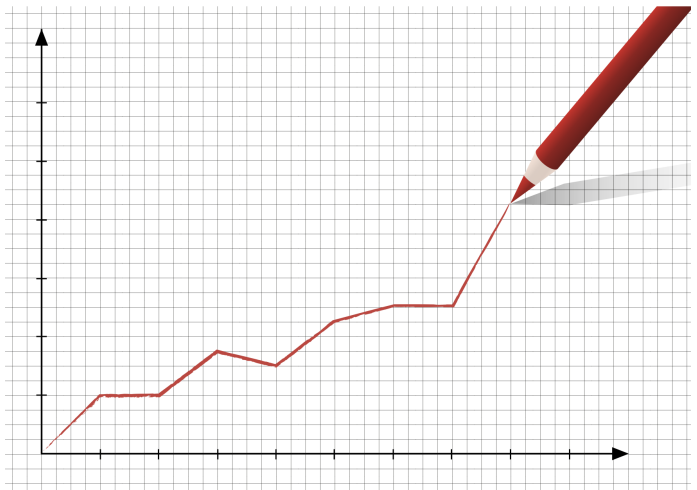

Figure 16: .

Outline

Conclusion

Our main goal was

-
-

Our main contribution was

-
-

Our main results was

-
-

Future Challenges

Conclusion

Our future goal was

Our future goal was

-
-

Thank you !

References

[1] Musa Ndiaye, Gerhard Hancke, and Adnan Abu-Mahfouz. “ Software Defined Networking for Improved Wireless Sensor Network Management: A Survey ”. In: 17.5 (May 4, 2017). 00053, p. 1031 (p. 4).

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[3] B. Di Martino et al. “ Internet of Things Reference Architectures, Security and Interoperability: A Survey ”. In: *Internet of Things* 1-2 (Sept. 2018). 00006, pp. 99–112 (p. 5, 6).