

## Summary of “A Note on Distributed Computing”

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According to the paper “ A Note on Distributed Computing”, there are crucial differences between non-distributed objects and distributed objects. These differences make necessary to the programmer be aware of problems of dealing with local and remote computing, these problems can involve: latency, memory access, partial failure and concurrence. It's necessary to highlight that most of these problems are easily solved if all objects are local

Latency is a problem related with the amount of time necessary to communicate with the remote. These communication is very slow, while local computing would take a value  $X$  of time to communicate, remote computing can take a value  $10000 \cdot X$  to send the same information.

Memory access is responsible for problems related to pointers. The programmer must be aware that some objects are executing in different virtual machines and therefore they have different address spaces.

Partial failure is a big issue in remote programming. This type of failure is caused when a remote machine crashes during the execution of a task. This failure can make the system inconsistent because the local machine will never be capable of treating the error that occurred in the remote. The same occurs for concurrence, it's really hard to know what's happening in a remote using concurrency to process his tasks.

The engineers and programmers, willing to use distributed computing, must recognize the main differences between local computing and remote computing. They have to know whether they are sending tasks for local or remote machines, by this they are capable of design better objects for each situation. One option usually used is to create interfaces and force objects to extend these interfaces making them choose to be local objects or remote objects.