Introduction

ASIS & Sema Group Grenoble

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9500 STAFF IN OVER 80 LOCATIONS

Argentina • Belgium• China • Denmark • France • Germany • Hong Kong • India
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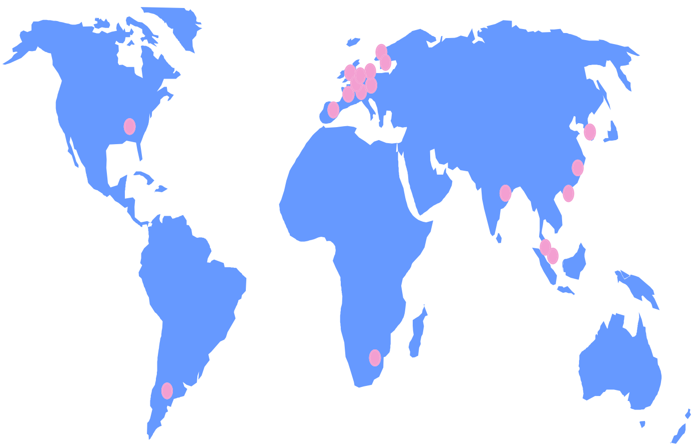

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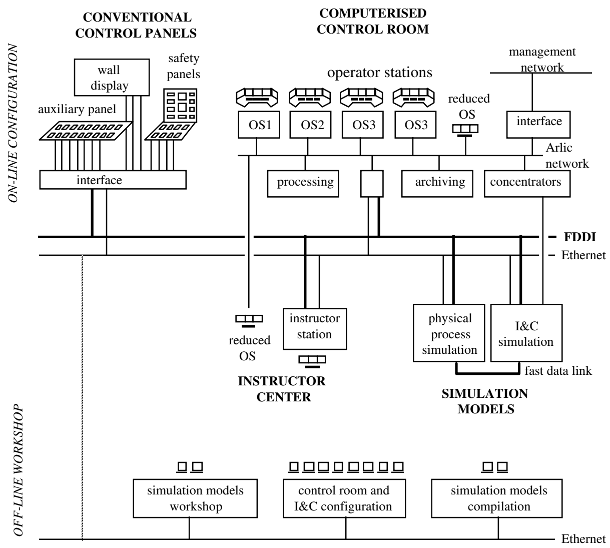
SimuN4 ARCHITECTURE



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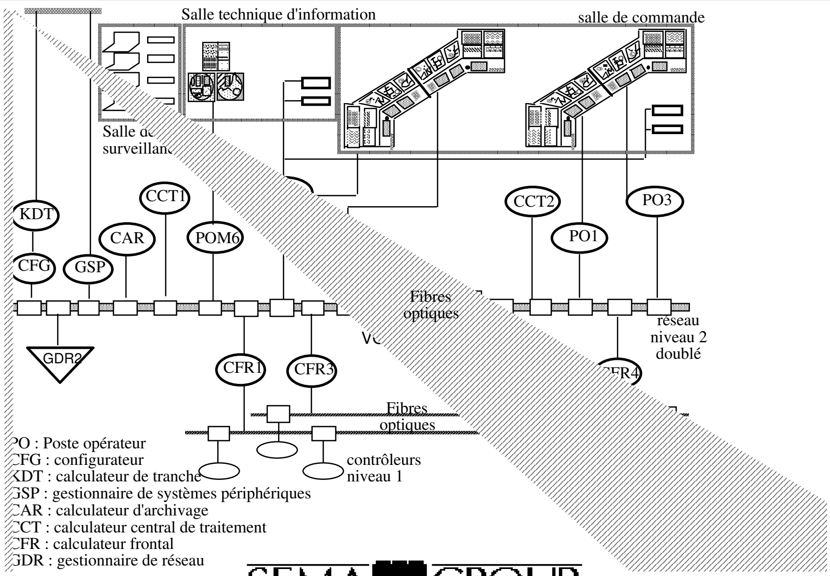
ARCHITECTURE DU KIC-N4



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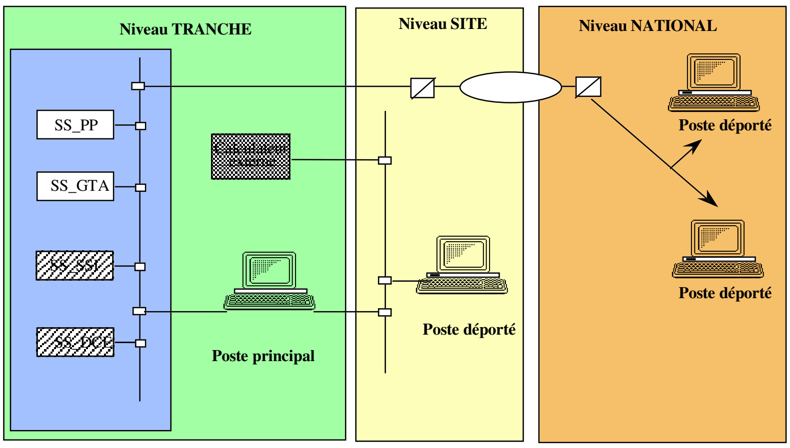
GEN_ADA for SimuN4

- ✓ Simulator : needs « Snapshot and replay »
- ✓ Developpers mark the variable to be copied with a pragma
- ✓ Tool to translate the pragma in some code to allow

  « Snapshot / replay »
- ✓ Only syntactic

ARCHITECTURE DU PSAD



GEN_ADA for PSAD

- ✓ PSAD : 600 HOOD Objects
- ✓ Developpers don't know where the objects will be
- ✓ Distributed application on Ada unit base
- ✓ Before compilation and link, write a Unit / Process table
- ✓ Tool to translate Procedure Call in RPC

ASIS in an Industrial Context

ASIS : a useful and powerful tool for Ada development

Examples of usage in an Ada project:

- Adapt automatically non-portable section of code
- Build a personnal Ada pre-compilator
- Check for programming rules
- Cypher confidential source for bug reporting
- and much more...

- A Semantic tool
- A Standard

ASIS in an Industrial Context

Why don't we use Asis 83 ?

We work with DEC-Ada compiler and there is no ASIS implementation for it.

Alsys proposes an Asis Implementation, which we couldn't accept for two reasons :

☞ The price of the Asis tool.

☞ The cost of adapting every application written with DEC-ADA for recompilation with Alsys compiler.

What do we do ?

We build our own tool (GEN_ADA) that offers similar possibilities,

but we would prefer using Asis.

ASIS in an Industrial Context

Our tool : GEN_ADA

- ☞ Looks like Asis.Elements.Traverse_Element
- ☞ Generic Ada 83 package
- ☞ Instantiation with 3 procedures (pre_op, middle_op and post_op)
- ☞ Based on Mira (LL1 syntactic tool)
- ☞ Builds the semantic information while creating the tree

☺ It works.

☺ We haven't any other tool of that kind.

☹ It's slow (compilation time and execution time).

☹ It does not offer the same possibilities than ASIS's.

☹ You can never access all the semantic information during a Traversal

ASIS in an Industrial Context

We cannot start an Ada 95 project now

- There is nothing for Open-VMS right now.
- Ada 95 is not a well-known language in the company.
- We have to evaluate thorongly an Ada 95 compiler (e.g. Gnat)
  (only a quick evaluation has been carried on for now)
- We wait for Ada 95 programming tools.
  (for example, GDB, which is not perfect, yet)

But it is a question of time...

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ASIS in an Industrial Context

ACT will produce an Ada 95 compiler for Open VMS on DEC Alpha.

➥ We will, possibly, use Gnat (and some other compilers) for the future Ada 95 projects.

➥ If it's available for DEC-Alpha then we could use ASIS.

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