**Application Domains**

The main application domains for Jovial are embedded systems that are specialized to perform certain dedicated functions which are mostly used in military aircrafts such as Fighter jets, Bombers, Cargos and Helicopters.

Jovial is also used in defense systems and advanced cruise missiles which are used by the NAVYs.

It’s also used by NASA for their “National Airspace System” which is an air traffic control system.

Then it’s used for many radars and navigation systems as well.

But the most notable application would be the “Milstar” which is a communications satellite.

**Installation**

Jovial compilers are very expensive and resource hungry so it’s beyond the resources an average programmer like us have.

Even though there are free compilers available now but the process of getting a Jovial compiler is very complicated without a government contract.

DDC-I, Inc. & SEA, Inc. are the most well-known suppliers in the market for Jovial compilers and embedded systems support tools

**Example 1**

* Here’s an example of a Jovial function to calculate a factorial:

PROC FACTORIAL(ARG) U;

BEGIN

ITEM ARG U;

ITEM TEMP U;

TEMP = 1;

FOR I:2 BY 1 WHILE I <= ARG;

TEMP = TEMP\*I;

FACTORIAL = TEMP;

END

In this example the factorial Procedure or the factorial function has one unsigned integer input ARG and an output Temp which is of the same type. Now the value of temp is set to 1 then a for loop starting from I=2 will run till the value of ARG and in the loop the factorial is calculated and returned to temp and if ARG is less than 2 then the output will be 1.

**Example 2**

* Here’s another example of a Jovial function that’s used to retrieve the element of an array:

PROC RETRIEVE(CODE:VALUE);

BEGIN

ITEM CODE U;

ITEM VALUE F;

VALUE = -99999.;

FOR I:0 BY 1 WHILE I < 1000;

IF CODE = TABCODE(I);

BEGIN

VALUE = TABVALUE(I);

EXIT;

END

END

In this example the RETRIEVE procedure takes an unsigned integer input CODE and a floating-point output VALUE. It searches the 1000-element array TABCODE for an element that matches CODE, and then sets the floating-point variable VALUE to the element of array TABVALUE having the same matching array index. If no matching element is found, VALUE is set to −99999.0

**Conclusion**

So, to conclude Jovial was developed as a new “high-order” programming language based on ALGOL 58.

It was used to develop software for a broad range of military and aerospace systems like it was used in aircrafts, radars and for missile navigation. It was also used by many air traffic control systems.

Jovial influenced many programming languages like CORAL, SYMPL, Space Programming Language in short SPL and to some extent in CMS-2.

Only the systems with old infrastructures uses Jovial now.

As most of the Jovial implemented systems are being replaced by more Agile systems that are faster, less costly and up to date.