**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION**
**ORGANISATION INTERNATIONALE DE NORMALISATION**
**ISO/IEC JTC1/SC29/WG11**
**CODING OF MOVING PICTURES AND ASSOCIATED AUDIO**

**ISO/IEC JTC1/SC29/WG11**
**MPEG97/M1820**
**Seville, ES**

**Title:** **Flavor (MSDL-S) Translator to C++ Version 1.2a**
**Source:** **Yihan Fang and Alexandros Eleftheriadis**
**Dept. of Electrical Eng., Columbia University, New York, NY 10027, USA**
**{fang,eleft}@ee.columbia.edu**
**Group:** **MPEG-4 Systems**
**Date:** **February 10, 1997**

## Abstract

This announces the availability of the Flavor (also known as MSDL-S) translator to C++, Version 1.2a. The code can be downloaded from the following sites:

http://www.itnm.columbia.edu/flavor/code
ftp://dot.ctr.columbia.edu/

Both sites require the usual WG11 login and password.

The README file from the package is attached.

# Flavor Translator
Release 1.2a

Yihan Fang and Alexandros Eleftheriadis
{fang, eleft}@ee.columbia.edu

Department of Electrical Engineering and
Image Technology for New Media Center
Columbia University
New York, NY 10027, USA

Febrary 11, 1997

## Overview

This software package is version 1.2 of a translator from the Formal Language for Audio-Visual Object Representation (Flavor) to C++. The bitstream syntax design of Flavor is currently part of the MPEG-4 System Description Language (MSDL) Working Draft and the translator can be used to translate MSDL-S to C++. A future release will also support generation of Java code.

The Flavor translator will generate the entire parsing skeleton code for a bitstream syntax specified using the syntactic description language (identical to MSDL-S as defined in Contribution ISO/IEC MPEG96/1483). The generated code is in C++, and includes all the necessary operations to parse audio-visual objects from a bistream. The translator is accompanied by a C++ run-time library for AV bitstream Input/Output operations. This library must be linked with the generated code in order to produce functional executable programs.

A short description of the program follows. For more details, please refer to the Flavor_manual.doc in doc directory (PostScript format file is also included).

## Files

The following are the files released in this version.

bin/flavorc
: The translator program that takes as input a set of MSDL files and translates them into equivalent C++ files.

lib/libflavor.a
: This is the Flavor run-time library. Currently, the library only contains optimized, fully-buffered, bitstream input/output functions. These are generic enough that they can be used with any program dealing with bitstream-oriented data.

include/public/flavor.h, flavor_util.h, flavor_bitstreamio.h, flavor_map.h

These are the header files which provide all the function prototypes in libflavor.a. Only the file flavor.h needs to be included in programs.

There is also an examples directory that contains one simple and one more sophisticated example of how to properly write MSDL-S specifications. The first one (in examples/example1 directory) only contains a class declaration with a few simple data members. The second example (in examples/example2 directory) shows how different pieces of code: MSDL file, user defined method, etc work together. It contains conditional and repetitive data member declarations, VLC maps, etc. It also shows how a user can parse an object from a bitstream given by an input file and with a user defined print() method you can print out the values of the parsable elements obtained from the bitstream parsing. The third example (examples/example3/) tests arrays. The fourth example (examples/example4/) tests parameter types.

A hardcopy version of the manual pages in PostScript format will be placed in doc/Flavor_manual.ps. A specification of Flavor is also included in doc directory.

## Running the software

The following operating systems are supported.

| Operating System | |
|---|---|
| SunOS | 4.1.x |
| SunOS | 5.x |
| IRIX | 5.x |
| AIX | 2 |
| HP-UX | A.09.x |

The translator is simply run with the command:

```
flavorc file.msdl
```

where file.msdl is the MSDL-S source file. This will generate a C++ header file (file.h), and an associated C++ file (file_map.cpp).

## Contact Information

Inquiries, comments, suggestions, and bug reports are welcome. Please send them to: Yihan Fang (fang@ee.columbia.edu).

New excutable releases and updates can be downloaded in:

http://www.itnm.columbia.edu/flavor/

or

ftp://dot.ctr.columbia.edu/flavor/code/

with user name sc29wg11 and the MPEG password.