

# VarunaJayasiri-GSoC2008-expat

## Google Summer of Code 2008 – Project proposal

Project	Integrate Expat parser into Axis2/C soap engine
Student Name	Varuna Jayasiri
Email	vpjayasiri at gmail dot com

### Synopsis

Axis 2/C currently supports the XML parsers libxml <sup>1</sup> and Guththila <sup>2</sup>. It is possible to plug-in any XML parser to Axis2/C through its parser abstraction layer.

I will introduce Expat XML parser to AXIS2/C. Expat is probably the world fastest XML parser and it is a very robust parser. Expat will be plugged into Axis2 /C through a wrapper using the XML reader/writer interface of Axiom.

### Project

This project will consist of developing a pull layer and a Expat XML writer/reader wrapper for Axiom.

Expat is a push parser and Axiom interface is for a pull parser. Therefore a pull layer should be introduced to bridge them. The pull layer should be implemented with internal call-back handlers on top of Expat. The main challenge would be adding a pull interface to Expat without reducing its performance.

With the introduction of the functions

```
XML_StopParser
```

and

```
XML_ResumeParser
```

it is possible to stop and resume parsing easily enabling pull parsing. These functions had been added specifically for this purpose. However, these functions will become obsolete with Expat 3 release <sup>3</sup>.

There are some third party pull layers on Expat; therefore it is possible to examine how they have done it. Expat is also working on a Pull API project and it would be possible to get their ideas on this as well.

### Deliverables

1. Expat read/write wrapper for Axiom.
2. Unit test cases.

### Schedule

#### 1. Analysis and Design

Analyze the Expat parser and the interface of the Axiom and design a pull-layer for expat. A great attention will be given for performance of the parser at this stage.

-until end of May

Deliverables: Design documentation

#### 2. Implementation

Implement the pull layer for Expat and the wrapper to bridge it with Axiom. All code will be tested using unit tests.

-until mid August

Deliverables: A working Expat integration

### 3. Final Touch

Running complete tests with the help of the community and doing final touches to the code and documentations.

-until end of August

Deliverables: Completed Expat integration with documentation and test data

## Biography

I've been very enthusiastic about computers from my early ages and I participated in International Olympiad in Informatics 4 times and won a gold medal and 2 silver medals. I also participated at ACM regional's in Kanpur<sup>4</sup>, India with the team which was placed fourth. I was also in the team that developed Sinhala Search – the first Sinhala search engine<sup>5</sup>. I have worked as a SAP developer at MAS Intimates and as a web developer at Paradox Software.

I am studying at the Faculty of Engineering, University of Moratuwa, Sri Lanka. I have been blogging for around 1 year – [Something Different](#), and I participate in Topcoder<sup>6</sup> competitions regularly.

Although I haven't been involved in open source projects before I have been doing similar projects at my workplaces, and I have about 5 years of experience of programming with C/C++. Therefore, I think I will be able to develop a robust Expat integration for Axiom.

## References

<<FootNote>>

1. [<http://expat.sourceforge.net/> The Expat XML Parser]
2. [<http://www.cse.mrt.ac.lk/~premalwd/Projects/Guththila.html> Guththila-Soap Parser]
3. [<http://expat.sourceforge.net/dev/expat3.html> Changes in Expat 3]
4. [<http://www.cse.iitk.ac.in/users/acm/> ACM Regionals Kanpur]
5. [<http://www.sinhalasearch.com> Sinhala Search] - site is currently unavailable due to maintenance 😊
6. [<http://www.topcoder.com/tc?module=MemberProfile&cr=21475659> My Topcoder Profile]