CGM OPEN ACTIVITY REPORT — 2001
CLEVELAND TECHNICAL WORKING GROUP

Revision: 1.0

Date: March 27, 2001

Preface

This report describes activities of CGM Open Technical Committee meeting held on March 11, 2001 in Cleveland, Ohio.

Table of Contents

1 Meeting Details

1.1 Location and Dates

Cleveland, Ohio. March 11, 2001

1.2 Meeting

- CGM Open Technical Committee 11 March 2001.

1.3 CGM Open Attendees

- Dave Cruikshank – Boeing (Chief Technical Officer)
- Dieter Weidenbruck – ITEDO
- Lofton Henderson – (Program director)
- Ulrich Laesche - Ematek
- Forrest Carpenter – System Development, Inc.
- Don Larson – Larson Software Technology
- Kevin O'Kane – Auto-trol
- Franck Duluc – Aerospatiale Matra Airbus
- Harry Whittaker - Navy
- Martin Jackson – Bombardier (observing)
- Andrew Moorhouse – AECMA (observing)
- Dale Chase – Honeywell(observing)

2 Agenda

2.1 Technical Committee

The items on the agenda of the Technical Committee include:

- Netscape "#" fragment issue

- XML Europe 2001

- Browser Helper Object (BHO) use

- Funding for program director

- WebCGM Release 2 editing

- OASIS relationship

- HSI technology opportunity

- WebCGM DOM requirements

3 Output and Action Items

Item	Who	When	Status
Meeting Minutes	Cruikshank	3/30	Done

Test LiveConnect with Netscape 4.73; write evaluation of Netscape-proposed "#" fragment bug workaround.	Weidenbrueck /Laesche	??	In work
Need volunteer to manage future XML graphics tracks	All	6/30	---
Program Director funding ideas	All	6/30	---
Picture behavior clarification for WebCGM Release 2	Henderson	3/30	In work
Complete editing for WebCGM Release 2	Cruikshank	4/15	In work
Circulate current version of WebCGM Release 2	Cruikshank	3/30	Done
Convert editing directives to html errata	Cruikshank/ Henderson	4/15	In work
Update cover page on the W3C web site	Cruikshank	4/15	In work
Amend bylaws to cover current governance	BOD	??	
XML encoding model of CGM	Cruikshank	Tabled	---
Forward CGM Defect wording on NUBS/NURBS	Cruikshank to ??	Tabled	—
Identify resource with IDL expertise	All	??	---
CGM DOM requirements mapping with SVG DOM	Duluc/O'Kane /Laesche	??	In work

4   Activity Reports

4.1   Technical

Dave Cruikshank led the technical discussions.

4.1.1   Activity Review

4.1.1.1   Netscape "#" fragment issue

There appears to be different solutions depending on whether the version of Netscape navigator is 4.73 or 6.0. The LiveConnect interface is used for 4.73 and a GetAttribute call works in 6.0. It was decided that CGM Open would concentrate on version 4.73 and defer version 6.0 until it is more stable. Dieter and Ulrich will work through the LiveConnect process in 4.73 and report back with any issues

4.1.1.2   XML Europe 2001

Dieter will teach a half-day tutorial on Tuesday morning covering WebCGM. On Tuesday afternoon, there will also be a half-day tutorial on SVG. The technical track for graphics will be a full day on Thursday and will include a comparison of WebCGM and SVG, plus three presentations on CGM and three presentations on SVG. Dieter has been co-chairing the graphics track for the last several XML conferences and is looking for a volunteer to take over this activity at future conferences.

4.1.1.3   Browser Helper Object (BHO) use

There have been several requests for the BHO, however requests are answered with a note clarifying that the use of the BHO is only applicable to someone developing a WebCGM viewer in a browser environment. To use the BHO, WebCGM application developers have to implement two pieces. One is the check for the existence of a fragment stored in a reserved area by the BHO, and the second is to provide a calling interface to the BHO.

4.1.1.4   Funding for program director

CGM Open is currently funding Lofton as the Program Director at a level of about 25%. His current level of effort is not sustainable over time out of those funds. CGM Open needs to find additional ways of funding him.

4.1.1.5   WebCGM Release 2 editing

The editing directives for Release 2 are complete with the exception of the clarification of picture behaviors in section 3.1.2.2. Continuing discussions are ongoing concerning this issue. Parts 3 and 4 are being reviewed for html links to make sure they resolve correctly. The cover page for the W3C web site concerning WebCGM will also need to be updated to reflect the status of release 2. The editing directives will be converted to an html errata page and referenced from the cover page.

4.1.1.6   OASIS relationship

For the foreseeable future CGM Open will remain an affiliate member of OASIS and not move into Member Section status. CGM Open needs to amend its bylaws to cover the current governance. Instead of having a board of direction made up of a president, secretary, and treasurer, the consortium is governed by a president and a team of advisors.

4.1.1.7   CGM software technology opportunity

A discussion took place concerning whether CGM Open should acquire a mature set of CGM software technology and tools that might be available. Concerns were expressed about resources needed to maintain such a set. It was agreed that there were a few tools available that might of be general use to CGM Open members. Other avenues will be explored for dealing with the technology.

4.1.2   WebCGM DOM requirements

The majority of the meeting was devoted to developing a scope and set of requirements for a WebCGM DOM

4.1.2.1   Scope

Three options were discussed for development of a WebCGM DOM.

1.   Full-blown DOM – expose all attributes and parameters of CGM

2.   Minimum DOM – expose CGM structure down to APS and APS attributes

3.   Limited DOM – expose CGM structure down to APS, APS attributes, and primitive attributes and parameters within APS

DOM addressing is done in two ways. The first is by ID. In order to support addressing solely by ID, we would have to develop a full-blown DOM. Additionally there would have to be an ID assigned to every element. Second addressing method is by using the treeloc mechanism, as defined in Hytime. Treeloc addressing could be supported by a minimum DOM, but managing the tree pointer would be a significant task. An alternative approach would be to combine these two techniques. Use the ID addressing to access to the APS level and treeloc addressing within the APS. A limited DOM could support this.

The decision was made to implement a limited DOM as a starting point. This means exposing structure down to the APS, manipulation of the APS attributes, and definition of actions on primitive elements within the APS. The DOM will be developed in IDL (Interface Definition Language) with a JAVA script binding. A volunteer is needed who can write IDL.

4.1.2.2 Requirements

An initial set of requirements for exposing structure down to the APS level, APS attribute manipulation, and control of primitives within APS was gathered.

4.1.2.2.1 Structure definition with control of structural attributes

- Metafile Level

    File name – readonly
    URL – readonly
    Metafile version – readonly
    Metafile description – readonly
        ProfileID
        PrifileED
        Etc.
    Begin metafile description – readonly (ATA only)
    Parent – readonly
    Enumeration of children – readonly

- Picture level

    Picture name – readonly
    VDC extent – readonly
    Current transform – read/write (transformation matrix)
    Parent – readonly
    Enumeration of children – readonly
    Visibility of children – read/write
    Enable/disable links within children – read/write

- APS level

    Layer type
        Id – readonly
        Layer description – readonly
        Layer name – readonly
        Parent – readonly
        Enumeration of children – readonly
        Visibility of children – readonly
        Enable/disable links within children – read/write
    Grobject type
        Id – readonly
        Name – readonly
        Region – readonly
        Viewcontext – readonly
        Linkuri – read/write
            Uri
            Link title
            Behavior
            Enable/disable
        Screentip – read/write
        Parent – readonly
        Enumeration of children – readonly
        Visibility – read/write
    Para/subpara type
        Id – readonly
        Region – readonly
        Viewcontext – readonly
        Linkuri – read/write
            Uri
            Link title

Behavior
Enable/disable
Screentip – read/write
Content – readonly
Parent – readonly
Enumeration of children – readonly
Visibility – read/write

4.1.2.2.2   Required events

OnClick
OnMouseOver
OnMouseOut
OnLoad
OnUnload
OnTransform

4.1.2.2.3   Control of primitive attributes (get/set – readwrite)

Color/intensity – Picture and APS level
Line/edge weight – Picture and APS level
Text font size/scale factor – APS level
Text font – APS level

4.1.2.2.4   Next steps

Map these requirements against the SVG DOM to see if we can extract a subset to support a WebCGM DOM.