CGM Open Minutes for 1998-04-17

(Submitted by: Dave Cruikshank, 1998-04-27)

1. Introduction

Location: Chicago, IL, Inso Office

Date: 17 April 1998, 8:00 am – 5:00 pm.

Purpose: Regular meeting of CGM Open

Presiding: Lofton Henderson moderated the meeting

Recording: Dave Cruikshank recorded and prepared minutes

The purpose of this meeting was to continue technical work begun at Memphis and generate CGM Open positions on a Web Profile for CGM.

2. Attendance

14 people attended the meeting. See attendance list at the end of these minutes

3. Proceedings

3.1 Business

3.1.1 Minutes

Dave Cruikshank will produce the minutes of this meeting by May 1, 1998

3.1.2 Next Meeting

June 15th in Annapolis MD, hosted by InterCAP. Meeting agenda and arrangements to be circulated.

3.1.3 Incorporation

Incorporation of CGM Open is being handled by the lawyers at InterCAP. An interest was expressed in incorporating as soon as possible in order that members could speak to other organizations with an official standing as a consortium. There is a possibility that members of CGM Open will want to coordinate with W3C or OASIS at SGML/XML Europe '98 in Mid-may. John Gebhardt will pursue the issue.

3.1.4 Possibility of CGM Open becoming a member of W3C

A question needs to be resolved concerning W3C's position on liaison memberships from other standards groups. CGM Open needs standing as a consortium prior to resolving this issue. Among

the attendees, there were three who's companies have membership standing in W3C: INSO, Boeing, and Xerox.

3.2 Strategic

3.2.1 Vector profile for the Web

Alan Hester met with Chris Lilley during the XML conference in Seattle. Chris indicated that he expected to put out a proposal by the end of April for the formation of a W3C working group to address a vector format. This working group will likely be considering many potential formats, including CGM. CGM Open will track this activity and contribute or participate as appropriate.

3.2.1.1 General strategy for a Web profile:

1. Whole-file format in initial Web application, with inline capability to follow whole-file.
2. Compatibility with existing binary CGM format (maybe through conversion)
3. Emphasize advantages of bandwidth for solution
4. Interoperability advantages
5. Rich font suite
6. Hyperlinking capability
7. Support for Unicode
8. Availability of a viewer to demonstrate support

   A reference viewer must be available in order to support the format. The availability of source code vs. binary executables came up for discussion. Several participants agreed to query their companies about the possibility of contributing binaries as plug-in modules. CGM Open will develop a common approach to make viewers available through the consortium with a statement of approval and certification. View testability and certification will be addressed by CGM Open in the future. Brad will explore the question of a single vs. multiple reference viewers. The availability of a limited version of the Inso/HSI MetaCheck product was discussed. This version would verify syntax conformance to the CGM standard or a profile and report a "yes/no" result.

3.2.1.2 CGM specific strategy for a Web profile:

1. Select the best of all four CGM versions covering the union of current successful practices among the major CGM technology vendors
2. Eliminate redundancies when selecting permitted elements
3. Incorporate the Unicode character set
4. Incorporate the required fonts

5. Design a method of hyperlinking based on CGM application structures
6. Satisfy the W3C requirements

3.2.2 Alternative formats

The concept of an XML based graphics language was discussed due to the submission of PGML by Adobe to the W3C. XML inline graphics presents an attractive implementation for web applications. PGML is essentially an XML encoding of PostScript and PDF. Similar work has been done by Inso on an XML encoding of CGM to meet the needs of CGM users on the web. CGMOpen felt that this work should continue in order to provide an in-line CGM solution for web applications.

3.3 Technical

3.3.1 Baseline documentation

The base line for a technical web profile submission to the W3C includes the following documentation:

1. ATA GREXCHANGE 2.4 Profile
2. Use of CGM as a Scalable Graphics Format - http://www.w3.org/TR/NOTE-cgm
3. Report from San Jose meeting between CGM Open and W3C representatives - http://cgmopen.org/Technical/w3c_rpt.html
4. CGM Open minutes from Memphis - http://cgmopen.org/Minutes/Memphis980310.htm & http://cgmopen.org/Minutes/Memphis980311.htm
5. Results of Chicago meeting - these minutes

3.3.2 Response to W3C web requirements

1. CGM Open agrees to the governing principle of "keep it simple" initally. It was agreed that there would be great value in the fast release of a simple foundation profile. However, as the WEB encompasses applications of all complexities, the full richness of CGM is recognized as a long term requirement and an advanced profile should follow soon.
2. A view context attribute needs to be defined to be associated with viewing to override behavior associated with Scale Mode metric and to provide centering and fitting to the smallest dimension.
3. An optional "screen tip" attribute needs to be added to the APS definition.
4. A "link description" attribute needs to be added to definition of links, possibly as a data item in the linkURL APS attribute.
5. The implementation of multiple links will require more discussion. CGM Open members approved the concept of a "one-to-one" link with multiple links handled indirectly. The W3C

will need to approve this construct.

6. An issue was identified concerning the structure of the linkURL address, in order to accommodate picture addressing within multi-picture metafiles and object addressing within pictures. A proposal will be generated and reviewed.
7. In order to support the switchable layers requirement, three schemes were discussed: an ATA-like modal definition, use of Application Structures, and use of separate Pictures. A proposal will be prepared on the use of Application Structures for review.

3.3.3 Work on Web profile proposal

3.3.3.1 Delimiter Elements

1. Work not completed, but it appears Segments, Protection Regions, and Compound Text Paths are prohibited. Compound Lines is still under consideration since linetype continuation across joined line primitives might be desirable, but no final decision has been made.
2. Unresolved issue concerning the content of the Begin Tile Array delimiter - should the profile only allow the Tile element OR the Bitonal Tile element in its content model and not allow a mix of the two?

3.3.3.2 Metafile Descriptor Elements

1. Work not completed, but it appears that the Metatfile Defaults Replacements, Color Calibration, and Glyph Mapping are prohibited. The Color Model must be expanded to migrate towards the SRGB color model. SRGB will have to be registered with ISO SC24 as a valid Color Model. The sequence tail definition for the Unicode character set will have to be documented. A strawman will be circulated for a complete definition of the profile for the Metafile Descriptor elements.

3.3.3.3 Picture Descriptor Elements

1. Work not completed, but it appears that all of the Bundle Representations are prohibited. Further work was assigned for a position paper on treatment of Specification Mode attributes. A strawman will be circulated for a complete definition of the profile for the Picture Descriptor elements.

3.3.3.4 Control Elements

1. Work not completed, but it appears that the Auxiliary Color/Transparency , Version 3 Clip and Protection Region related elements, along with Save/Restore Context and Compound Text Path elements are prohibited. New Region is permitted, since it is part of the Figure construct. A strawman will be circulated for a complete definition for the profile for the Control elements.

3.3.3.5 Graphical primitives

1. All Version 1 elements are allowed except Text, Polymarker, and Append Text.

2. The Arc Center Reversed is the only Version 2 element permitted.
3. The approved Version 3 elements are:

- Tile - All compression methods allowed except Group 3. Additionally, JPEG and LZW will be allowed. Registration work with SC24 will need to begin to register PNG as an allowable compression type.
- Bitonal Tile
- Polybezier
- Polysymbol - using the ATA referencing model

3.3.3.6 Attribute Elements

1. Work not completed, but all Bundle Indexes are prohibited. A strawman will be circulated for a complete definition for the profile for the Attribute elements.

3.3.3.7 Escape Elements

1. Work not completed, but if alpha transparency is proposed as a model attribute, it will have to be registered as an Escape element.

3.3.3.8 External Elements

1. Work not completed, although there was discussion about registering 3 GDP's which would allow direct embedding of whole JPEG, GIF, and PNG content pieces into CGM, in addition to allowing them within the Tile Array construct.

3.3.3.9 Segment Elements

1. All segment elements are prohibited.

3.3.3.10 Application Structure Descriptor Elements

1. Additional work needs to be done to finalize the allowable Application Structure Attributes for this profile.

4. Action Items

Action	**Who**	**Due by**
Produce Minutes	Dave Cruikshank	May 1
June meeting agenda	John Gebhardt	May 1
Brief POSC on CGM Open activities	Don Larson	
Produce schedule for incorporation	John Gebhardt	May 1
Track W3C graphics activities and report	Alan Hester/Lofton Henderson	May 15
Investigate possibility of joining W3C graphics effort	Lofton Henderson/Dave Cruikshank/ Alan Hester	start April 2

Action	**Who**	**Due by**
Investigate MS interest in PGML alternative, e.g., XGL	All	start April 2
Investigate availability of reference viewer	Dave Rahnis/All	start April 2
Proposal on whether CGM Open should have one reference viewer or many	Brad Powell	May 15
Investigate finishing XGL proposal for submission to W3C	Lofton Henderson	
Check with W3C on whether one to one link is satisfactory	Lofton Henderson	May 1
Draft proposal for linkURL addressing, to pictures & objects	John Gebhardt/ Dieter Weidenbrück	May 1
Draft proposal for use of APS for layer definition	Dieter Weidenbrück/Lofton Henderson/ Brad Powell	May 1
Position paper on element modes - scaled, absolute, mm, fraction	Forrest Carpenter/Don Larson/ John Dumas	
Strawman analysis of Text attribute elements and Control elements	Forrest Carpenter	May 1
Strawman analysis of Metafile Descriptor, Picture Descriptor, and Control elements	Don Larson	May 1
Review John Gehbardt's web profile front matter and comment	All	May 1
Create editing directives for Roy Platon	Lofton Henderson/Dave Cruikshank	May 13
Create Action item list	Dave Cruikshank	April 20
Reminder about logo contest	Dieter Weidenbrück	April 20
Determine Roy Platon edit status	Lofton Henderson	April 20
Verify LZW royalty situation	???	???
Identify sequence tail for Unicode	John Gebhardt	May 8

5. Attendance List

Name	**Company**	**Email**
Gary Lyle	Boeing	gary.w.lyle@boeing.com
Brad Powell	Zeh	bpowell@zeh.com
Dave Rahnis	Bentley Systems	dave.rahmis@bentley.com
Lofton Henderson	HSI / Inso Boulder	lofton@cgm.com
Don Larson	Larson Software Technology	dlarson@cgmlarson.com
Alan Hester	Xerox	alan_hester@wb.xerox.com

Forrest Carpenter	System Development	forrest@sysdev.com
Dieter Wiedenbrück	ITEDO Software	dieter@isodraw.com
John Dumas	Zeh	jdumas@zeh.com
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Gary Zaffke	Jackson Graphics	gzaffke@jacksongraphics.com
Steve Frahm	Jackson Graphics	sfrahm@jacksongraphics.com

6. Appreciation

Thanks to Inso for providing the meeting facility and logistical support to CGM Open during this meeting.