Programmatic Creative

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Introduction

This document outlines the technical aspects of a programmatic campaign using DoubleClick's Dynamic Platform. The intended audience are developers, technology leads, producers & campaign managers. This document has been prepared by Google & Fancy Pants Group.

Ad Platform

We used <u>DoubleClick Studio</u> for the hosting & delivery of rich media. This included the use of <u>Asset</u> <u>Library</u> as a content management system (CMS). We used <u>DoubleClick Campaign Manager</u> for ad serving and <u>DoubleClick Bid Manager</u> for programmatic platform.

Development

<u>Google Web Designer</u> was the primary development tool for building the creatives. Including creative design, animation & programming. For the structure of the feed (spreadsheet) we used <u>Google Sheets.</u>

Creative

Layout and design was a joint effort between Fancy Pants Group and various internal teams.





Creative Considerations

Dimensions

Many campaigns call for seperate dimensions for the creatives. Your standard Middle Page Units are 728x90, 160x600 & 300x250.

However, many publishers allow slots to be much larger - 970x(250-->500 expandable) & 300x600 are also common. As well as more mobile specific sizes such as 300x50.



Dynamic Elements

When preparing a dynamic creative, it is important to understand the various elements that a client may need to be dynamic. Though every element of your creative can somehow be made dynamic, it is best to pinpoint the campaign requirements and avoid extra work. This allows your development team to work faster and confidently.

These are some common dynamic elements:

- Images
- Video
- Сору
- Exit Destination (url)
- Colors (Copy & Graphic elements)
- Animations
- Functionality (publisher requirements)



Requirements

Apart from creative direction and client style guides, there are a number of additional considerations when building out an ad campaign. These can be specific to the ad platform (DoubleClick QA) or publisher.

Often, publisher specs are different from each other. For this issue it is generally accepted to use LCD (Lowest Common Denominator) specifications. This ensures that your creatives will be accepted by all publishers.

Sample Campaign Specific Requirements:

- Keep initial load under 100K. Sub load is flexible.
- Auto animation should be under 15 seconds, user initiated has no limit
- Sound only on click
- Creatives can't be hosted by or make a call to an unapproved third-party ad server (i.e. keep everything in asset library)
- All landing pages must be crawlable.
- 1pxl border

Sample Content requirements:

- All GIF and SWF ads with partially black or white backgrounds must include a visible border of a contrasting color to the majority background color of the ad.
- Strobing, flashing backgrounds, or otherwise distracting ads are not allowed.
- Image content and associated website content must be family safe. Any image ads that contain Non-Family Safe or Adult material in the ad or website will not be accepted.
- Trick to click ads are not allowed. Ads can't pretend to be a system or site warning. Ads can't mimic or resemble Windows, Mac, or Unix dialogue boxes, error message, etc.

General best practice:

- On exit, all creatives should:
 - Stop all videos (if creative includes videos).
 - Stop all sounds (if creative includes sound).
 - Resolve the ad to end-frame graphics.
- Exit conventions for click-through ads

Collapse method + exit: If the user is on the expand panel and exits (clicks through), then the ad should collapse at the same time.

Expansion timer + exit: The expansion timer should stop at the same time as the user clicks through.

Video mute + exit: Sound should mute when the user clicks through from a collapsed or expanded panel.

- Video timer + exit: The video and the timer should stop when the user clicks through from a collapsed or expanded panel.
- See the click-through exit issues and collapse and video mute upon exit issues articles in the Help Center.





We use Google Sheets to organize and determine the content of the dynamic elements. This simple spreadsheet program allows for easy content organization and powerful campaign management.

Setting up a dynamic feed allows for advanced creative control and sophistication. It allows you to build multiple creative iterations targeted to different user groups and to display different ads depending on many programmatic triggers.

Feeds can be built with these formats:

- Google spreadsheets (recommended)
- CSV
- XML

How to create a dynamic feed (article)

Google Chrome has 2 very useful extensions:

- <u>Dynamic Feed Validator</u> which allows you to verify the content of your feed.
- Dynamic Asset Viewer which allows you to live preview your assets.

Connecting Accounts

The first step is to ensure that your dynamic feed is connected to your account, and that it is shared with 2 specific back-end aliases.

- 1. Open Sharing Settings
- 2. Share with content owners (those who have permission to view and/or edit the feed)
- Share with 2 Google aliases: StudioDynamicCreative@system.gserviceaccount.com studio-dynamic-creatives@google.com

o has access Share with these email addresses	
Share with these email addresses	
Share with these email addresses	
	•
StudioDynamicCreative@system.gservicea Can ed	t ▼ ×
Studio Dynamic Creatives Can edi studio-dynamic-creatives@google.com	t ▼ ×
nvite people:	
Enter names or email addresses	Can edit 👻





Columns

Each column represents a configurable setting for your campaign creative. This could be creative changes, reporting metrics and programmatic attributes. It is general best practice to color code extensive feeds; this plays no functional part but is useful for organizing your content. For secure editing, it is best to only share this document with approved individuals to avoid accidental deletion or improper content.

Standard Columns

All feeds should have 3 standard columns.

- Default This determines a fallback row, should no other rows be triggered.
- Unique ID This is a required column. Each row must be unique.
- Active Gives the ability to turn rows on/off.



Dynamic creative reporting provides the ability to view how each unique dynamic creative iteration (i.e. row in the feed) is performing against one another. Dynamic creative reporting is available through DCM Report Builder.

Instead of just using the Creative ID dimension, as you would for standard rich media creatives, dynamic creative reporting uses additional dimensions to pull creative information from each row in the feed. Dynamic creative reporting has the ability to pull the following columns from the feed as dimensions:

- Unique ID
- Reporting label
- Reporting dimensions 1, 2, 3, 4, 5, 6 (optional)



With advanced dynamic creative, you use a targeting strategy (or rules) and/or dynamic rotation options to dictate which content is eligible to be served upon impression.

Here are some common targeting strategies:

- Geo-targeting <u>AdWords API</u>
- Placement ID
- DBM Segment ID
- Start / End Dates

Orective		•			2 🗸 🗸		÷
Creative	Slide2 Text 160x600 mobile	CTA Text	Card Image 300x250	Background image 160x60	CTA URL	BG exit URL	

The content columns of your feed correspond to the elements in your creative that you want to be dynamic.

Creative elements that you can make dynamic:

- Any Text or Media (Images, Video & Audio)
- Animations
- Color
- HTML
- Functionality





ID 💌	Reporting Label
1	Awareness_Chicago V1_APPLY NOW
2	Awareness_Chicago V1_LEARN MORE
3	Awareness_Chicago V2_APPLY NOW
4	Awareness_Chicago V2_LEARN MORE
5	Awareness_NYC V1_APPLY NOW
6	Awareness_NYC V1_LEARN MORE
7	Awareness_NYC V2_APPLY NOW
8	Awareness_NYC V2_LEARN MORE
9	Awareness_DC V1_APPLY NOW
10	Awareness_DC V1_LEARN MORE
11	Awareness_DC V2_APPLY NOW
12	Awareness_DC V2_LEARN MORE
13	Awareness_SFO V1_APPLY NOW
14	Awareness_SFO V1_LEARN MORE
15	Awareness_SFO V2_APPLY NOW
16	Awareness_SFO V2_LEARN MORE

Rows

Each row represents a unique creative iteration.

It is general best practice to name (reporting label) each row with pertinent information as it corresponds to the content of that row. This allows for reporting to be clear and distinct. This also allows for the feed to be more manageable.

A default row should be what your client would like to show in the event a targeted row is not triggered.

Should your client want to disable specific rows (i.e. a product is no longer available) This is accomplished by simply changing that row's 'active' value to FALSE.

Asset Library

When using your account's Asset Library tool to host your media files (images / video) there is a specific path that needs to be entered into that column's values.

For instance, this 300x250 background image is being pulled from an Asset Library path:



To find this unique path:

- 1. Log into your Studio account and navigate to the Asset Library environment.
- 2. Find your advertiser and campaign specific folders .
- 3. Choose the asset you'd like and copy its dynamic path, as seen below.





Uploading

Once your feed is completed it is time to upload.

- 1. <u>Creating a profile</u>
- 2. Add your feed

Set data types for your feed

After the initial upload of your dynamic feed into Studio, you are required to set the appropriate data type for each column in the feed. Setting the data types allows Studio to check that the data in the feed is valid whenever you update dynamic content in the future. <u>More help here.</u>

Values	
Field name	Field type
Unique_ID	Whole number 🜩
Reporting_Label	Text 🜩
Reporting_Message_Type	Text 🜩
Reporting_Message_Version	Text 🜩
Reporting_Image_Info	Text 🜩
Reporting_DBM_Segments	Text 🜩
Reporting_Geography	Text 🜩
GeoTarget	Accurate geographic type 💠 🍞
Placement_IDs	DCM placement ID 🗢
DBM_Segment_IDs	Custom value 💠
Start_Date	DateTime 💠
End_Date	DateTime 💠
Active	Boolean 💠
Default	Boolean 💠
Slide1_Text_300x250	Text 🜩
Slide2 Text 300x250	Text 🗢
Slide1_Text_728x90	Text 🜩
Slide2_Text_728x90	Text 🜩
Slide1 Text 180x800	Tavt A
	rons _{qu}
Slide2_Text_160x600_mobile	Text 🜩



Invocation Code

The following code recommendations are relevant if you are hand-coding your HTML5 ads. If you are using Google Web Designer's new dynamic workflow, please see this article for more set-up information

For hand-coders, after your feed has been uploaded successfully with no errors, the invocation code will be made available. More help here Here is a sample code snippet(*truncated*):

```
// Dynamic Content variables and sample values
   Enabler.setProfileId(1048576);
   var devDynamicContent = {};
   devDynamicContent.SAMPLE_Feed = [{}];
   devDynamicContent.SAMPLE_Feed[0]._id = 0;
   devDynamicContent.SAMPLE_Feed[0].Unique_ID = 1;
   devDynamicContent.SAMPLE_Feed[0].Reporting_Message_Type = Awareness;
   devDynamicContent.SAMPLE_Feed[0].Reporting_Message_Version = Awareness_15000pts;
   devDynamicContent.SAMPLE_Feed[0].Reporting_Image_Info = Chicago V1;
```

Connect the dynamic data

DoubleClick

Add the code to connect the dynamic data to the individual elements within your creative such as text, images, and exit URLs. Be sure to add the code after the Enabler has already been initialized.

When writing code that accesses dynamic data, use **dynamicContent** and not **devDynamicContent**, as noted in the setup code above, and shown in the examples below.

```
// Example: Setting dynamic text
document.getElementById(headline).innerHTML =
    dynamicContent.SampleElement[0].headline;
// Example: Setting a dynamic image
document.getElementById(background).src =
    dynamicContent.SampleElement[0].image_url.Url
// Example: Setting dynamic click-through URL
document.getElementById(cta).addEventListener(click, ctaHandler);
function ctaHandler() {
  Enabler.exitOverride(
      yourExitID,
      dynamicContent.SampleElement[0].landing_url.Url);
}
```

The above examples reference the dynamic content directly. An alternative approach is to create an object, add the dynamic elements to the object as properties, and then reference the object's properties directly. This may make your code easier to read and to modify. See the following example:

```
var data = {};
data.headline = dynamicContent.SampleElement[0].headline;
and then, later in your code:
document.getElementById(headline).innerHTML = data.headline;
```

Creative Development

Text - Leading/Kerning/Line Breaks

In order to keep as much flexibility as possible, the dynamic feed content also includes HTML formatting capabilities that will allow control over line breaks, font size, etc.

Eg:

Column Slide1 Text:

This[®] is
a sample
of editing
text through HTML tags.

Column Slide2 Text:

Another[®] example
with more
symbols^t

Animations

When using dynamic variables in GWD, there can be a short delay or flicker as the dynamic values get loaded in and entered into the fields. In order to prevent this unwanted flickering, we recommend that you pause the ad until the elements get loaded in. Here is one way to implement this pause:

```
Pausing Animations in .js
//locate and pause all Animations
var anim = document.querySelectorAll(.animation);
for (var i = 0; i < anim.length; i++ ) {
   anim[i].setAttribute(class, paused);
}
//wait to load animations until Page is Fully Loaded
   if (Enabler.isPageLoaded()) {
   pageLoadedHandler();
} else {
   Enabler.addEventListener(studio.events.StudioEvent.PAGE_LOADED,
pageLoadedHandler);
}
function pageLoadedHandler() {
//Play Animations
   for ( var i = 0; i < anim.length; i++ ) {</pre>
   anim[i].removeAttribute(class, paused);
}
}
CSS
.paused{
   -webkit-animation-play-state:paused !important;
      -moz-animation-play-state:paused !important;
        -o-animation-play-state:paused !important;
           animation-play-state:paused !important;
}
```



DBM / DCM

Up to this point we have been working solely in Studio, DoubleClick's rich media environment, but there are two other vast areas in which ad serving and programmatic buying are set up. We will not go into detail about these other areas but rather explain their relationship to the Dynamic feed, rich media creatives and publishing.

DoubleClick Campaign Manager

After creatives are approved and published within Studio, they are available to traffic through DCM. There are many tools and resources that can help your team when navigating and setting up your campaign in this environment. There are however a couple things to note specifically when setting up a dynamic campaign.

Override Exit

When controlling the URL destination of a dynamic creative you must use a separate method available within the <u>HTML5 Studio API</u>. This allows the creative to override any hard coded URL's that are added within the DCM setup. This is a required setup when working with any HTML5 dynamic creative. Below is an example. <u>More help here</u>.

Set up a string variable, myURL, to hold the destination URL in your creative. The URL can be hard-coded, passed in dynamically through XML, or sourced from dynamic content in rich media dynamic creatives.

In this example, the variable myURL is hard-coded to http://www.yoursite.com.

```
var myURL = http://www.yoursite.com
function exitClickHandler() {
  Enabler.exitOverride(exit name goes here, myURL);
}
exitButton.addEventListener(click, exitClickHandler, false);
```

DoubleClick Bid Manager

The main link between the Studio setup and DBM is within the feed. At this point in the development of your dynamic campaign you should be working with a DBM specialist or team member who is providing specific ID's to be used within the feed that control targeting and placement. As noted before, these are added to one or more columns of the feed. Not all dynamic campaigns require these ID's from DBM, such as Placement ID, geo-targetting & time of day.





Prioritized Rules

With prioritized rules, you can create up to eight rules per feed, which enables you to filter through a feed up to eight times. Previously, a feed could be filtered through just once and if no match was found, a default row would be served.

Example:

Filter by remarketing values first; if no match found, then filter by geo location, if no match found, then filter by creative ID.

Use Cases:

- Sophisticated, multi-pass filtering on feeds.
- Multiple levels of defaulting content.

Studio Profile - Step 3 Manage Rules:

- Add a rule for each pass through the feed.
- Each rule will target a different column (or set of columns).
- A rule can contain multiple columns which use 'AND' logic, not 'OR'.
- Rules do not build upon one another. Each rule is a clean slate for new targeting.

Additional Notes:

- Prioritized rules are set per feed, and therefore cannot be applied across feeds.
- 8 rules maximum.
- Data type of "custom value" or "remarketing key" requires additional info see help center
- Empty cells are not eligible unless "allow empty cells" checkbox is checked -- note that this is the opposite of how dynamic usually works, where empty cells are eligible.
- A row containing incorrectly formatted values (e.g. geo, AssetLibrary) is not considered eligible.

More information here on prioritized rules.

Optimization

Optimized rotation is an advertising strategy in which the best-performing rows within a feed are served most frequently. Optimization is based on one of the following performance indicators: click-through rate (CTR) or click-through-conversion rate.

Types of Optimization

- Standard optimization The content optimization engine selects the optimal row based on CTR.
- Conversion optimization The content optimization engine selects the optimal row based on one of the following DCM Creative Optimization settings: clicks, post-impression, post-click, or post-click and post-impression.
- Weighted conversion optimization The content optimization engine selects the optimal row based on weights assigned to selected conversion activities in DCM.



Preview

Force Previews

To force a specific row to serve in the preview environment, all that is needed is that row's Unique ID. Adding this value to the proper field will force that row upon previewing.

The available preview parameters are based on the targeting rules you set up in your profile. Enter the parameter that you want to preview. For example, if you're using placement ID targeting, the parameter field will say placement ID, and you should enter the same placement ID as the one entered in the feed.

Profile: GWD_F	Full_Dynamic Copy draft	Lock OFF	Loading	
Last saved: Feb 12,	2016 12:03 PM ID: 1055124	4 Archive status: Active	SSL Compatibility: Compliant	Studio advertiser ID: 36770148
Draft				
0	2	3	4	6
New Profile	Manage Data	Manage Rules	Generate Code	Preview
~				
Forced preview (GWD_Full_dyn	Note: If the creative filters on date/ti amic_Feed	ime, select the correct date/time an	d enter the ID(s) for rows you want to	preview)
Forced preview (GWD_Full_dyn	Note: If the creative filters on date/ti a mic_Feed	ime, select the correct date/time an	d enter the ID(s) for rows you want to	preview)
Forced preview (GWD_Full_dyn Location	Note: If the creative filters on date/ti	ime, select the correct date/time an	d enter the ID(s) for rows you want to	preview)

Tearsheets

A tearsheet is another name for a creative preview. Tearsheets are generated in DoubleClick Studio and can be <u>saved</u> or <u>shared</u> with external users.

These are hugely helpful when a client needs to approve many iterations at a time. Using the force preview functionality you can determine which rows you'd like to send via public url.





Debugging

Payload

When debugging your dynamic campaign, it is important to understand the "View Payload" functionality that is available within all tearsheets. If for some reason the expected row is not serving, or possibly nothing at all is serving, navigating the payload is a good method to determine what is happening behind the scenes.

Tearsheet:)vnami	c Tears	sheet a	\square	
Save	Share	Clear all	Hide view payload	1 - 1 of 1	< >
Adjust prev creative nam review setti lone Draft	view settings ne: gwd_full_: ngs:	300x250			
Hide payload	lue		5		
GWD_Full_d GWD_Full_d GWD_Full_d media/studio/	ynamic_Feec ynamic_Feec ynamic_Feec 38029012/367	I[0].headline I[0].image_sr I[0].image_sr I[0].image_sr 770146_20150	= Default headline c.Type = file c.Url = https://s0.2mdr 0823102717891_gray.j	n.net/ads/rich	<
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сизтом) MPC	NEN	rs 🍫		

Inspect Element (javascript debugging)

Most of the errors that you encounter can be diagnosed through your browser's developer tools. It is good practice to test your creative in various environments to identify cross browser or device issues. Most common among these are javascript errors.

For any other questions about DoubleClick Dynamic Creative, please visit the DoubleClick help center.



