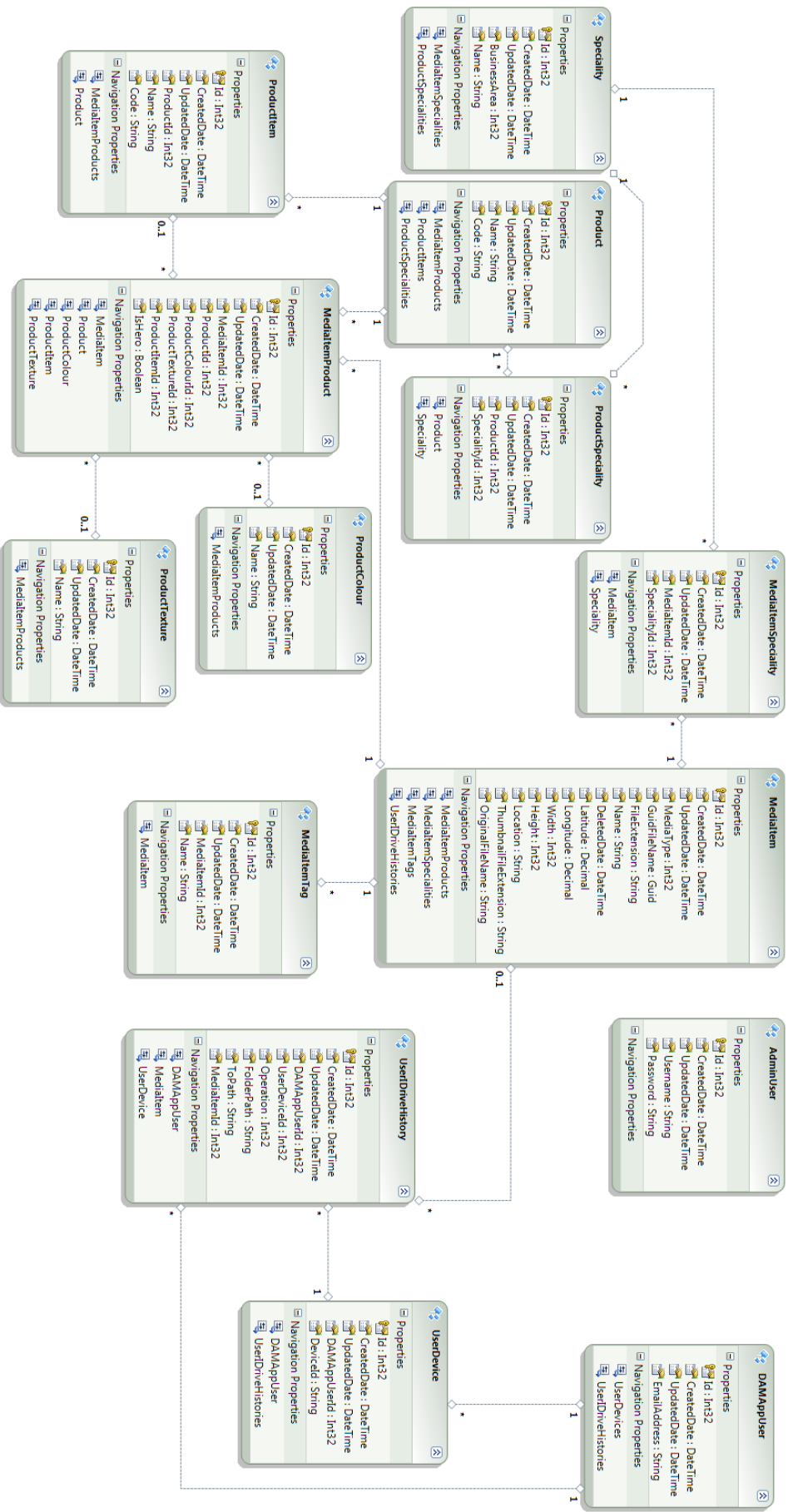# DAM APP - WEB SERVICES

This document outlines the web services provided for allowing the iPad application to interact with the web server where all the data is stored. An overview of the database schema in use on the server has also been provided to indicate what further data is being stored which might be useful to be exposed in future releases of the web services.

DATABASE SCHEMA

The following diagram is a representation of all entities and their relationships for the DAM database.

Speciality
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- Name : String
- BusinessArea : Int32
Navigation Properties
- MediaItemSpecialities
- ProductSpecialities

ProductItem
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- ProductId : Int32
- Name : String
- Code : String
Navigation Properties
- MediaItemProducts
- Product

Product
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- Name : String
- Code : String
Navigation Properties
- MediaItemProducts
- ProductItems
- ProductSpecialities

ProductSpeciality
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- ProductId : Int32
- SpecialityId : Int32
Navigation Properties
- Product
- Speciality

MediaItemProduct
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- MediaItemId : Int32
- ProductId : Int32
- ProductColourId : Int32
- ProductTextureId : Int32
- ProductItemId : Int32
- IsHero : Boolean
Navigation Properties
- MediaItem
- Product
- ProductColour
- ProductItem
- ProductTexture

ProductColour
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- Name : String
Navigation Properties
- MediaItemProducts

ProductTexture
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- Name : String
Navigation Properties
- MediaItemProducts

MediaItemSpeciality
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- MediaItemId : Int32
- SpecialityId : Int32
Navigation Properties
- MediaItem
- Speciality

MediaItem
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- MediaType : Int32
- GuidFileName : Guid
- FileExtension : String
- Name : String
- DeletedDate : DateTime
- Latitude : Decimal
- Longitude : Decimal
- Width : Int32
- Height : Int32
- Location : String
- ThumbnailFileExtension : String
- OriginalFileName : String
Navigation Properties
- MediaItemProducts
- MediaItemSpecialities
- MediaItemTags
- UserDriveHistories

MediaItemTag
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- MediaItemId : Int32
- Name : String
Navigation Properties
- MediaItem

UserDriveHistory
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- DAMAppUserId : Int32
- UserDeviceId : Int32
- Operation : Int32
- FolderPath : String
- ToPath : String
- MediaItemId : Int32
Navigation Properties
- DAMAppUser
- MediaItem
- UserDevice

AdminUser
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- Username : String
- Password : String
Navigation Properties

DAMAppUser
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- EmailAddress : String
Navigation Properties
- UserDevices
- UserDriveHistories

UserDevice
Properties
- Id : Int32
- CreatedDate : DateTime
- UpdatedDate : DateTime
- DAMAppUserId : Int32
- DeviceId : String
Navigation Properties
- DAMAppUser
- UserDriveHistories

WEB SERVICES

The web services have been coded as a combination of a set ASP.NET http handlers, and ASP.NET WCF. This has led to a combination of URLs being used to access the services as described below. All URLs have the base URL of http://www.marshalls.co.uk/dam-svc/

HTTP HANDLERS

The following http handlers have been implemented at the following URLs:

/api/getMediaItem

/api/sync

/api/containerList

/api/tags

/api/search_tag

/api/search_summary

/api/search

/api/carousel

/api/sendEmail – NB: This is a duplicate method – please ensure it is not being referenced

/api/idrive – NB: This functionality is not required – please ensure it is not being referenced

/API/GETMEDIAITEM

This method allows a specific media item to be accessed by its GUID reference.

Input parameters (Querystring):

Name	Description
mediaRef	The GUID reference of the media item

Output

JSON string of type "Media Item" with the tags and products properties excluded (see appendix). Any properties containing null values are omitted from the response. No compression is applied to the response.

The following error handling has been built into this method. All error responses are in JSON string format and compressed with Gzip compression. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions

mediaRef not found	Arises when the mediaRef querystring parameter is missing
mediaRef needs to be a Guid	Arises when the mediaRef is not a valid GUID
mediaRef not found	Arises when the requested item does not exist on the server
Various messages indicating a server error	Arises for all other server errors

/API/SYNC

This method allows a list of all assets to be retrieved that have been updated and deleted on the server since a specified date for a specified group of specialities.

Input parameters (Querystring):

Name	Description
since	The datetime (i.e. start date) for the list of assets in the following format: yyyy-mm – ddThh:mm:ss.xx e.g 2012-11-12T17:22:15.48
containers	A "pipe" separated list of specialities, e.g. Kerb|Paving|Block Paving

Output

JSON string of type "Sync Response" (see appendix). Any properties containing null values are omitted from the response. The response is also compressed using Gzip compression.

The following error handling has been built into this method. All error responses are in JSON string format. No compression is applied to the response. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions
since not provided	Arises when the since querystring parameter is missing
containers not provided	Arises when the containers querystring parameter is missing
since date is not a valid date	Arises when an invalid date format is passed in
Various messages indicating a server error	Arises for all other server errors

/API/CONTAINERLIST

This method allows a list of all containers (i.e. specialities) being used in the DAM system to be retrieved. This list can change over time so the app needs to be updated. There are no input paramaters for this method.

Output

A JSON string containing an array of type "Container" (See appendix). The output is compressed using GZip compression.

Any errors during the method call will return a HTTP Status code of 500 with details of the server error.

/API/TAGS

This method allows a list of all tags being used for images in the system to be retrieved. This list can change over time so the app needs to be updated.

Input parameters (Querystring):

Name	Description
Containers (optional)	A "pipe" separated list of specialities to retrieve tags for e.g. Kerb|Paving|Block Paving. If no value is supplied, tags for all specialities will be returned.

Output

A JSON array of strings, i.e. tag names. Any properties containing null values are omitted from the response. The response is also compressed using Gzip compression.

Any errors during the method call will return a HTTP Status code of 500 with details of the server error.

/API/SEARCH_TAG

This method allows media items on the server to be searched by tag. Results are returned as paged lists by page number.

Input parameters (Querystring):

Name	Description
Containers (optional)	A "pipe" separated list of specialities to retrieve results for e.g. Kerb|Paving|Block Paving. If no value is supplied, results for all specialities will be returned.
Tag	A "pipe" separated list of tags to retrieve results for e.g. Aggregate|Banded|Charcoal
Page	The page of results to retrieve, e.g. if there are 100 results, and a pagesize of 25 is used, supplying a value of 1 will return the first 25 results
Pagesize	The size of a results page

Output

A JSON array of type "Tag Search Result" (See appendix). Any properties containing null values are omitted from the response. The response is not compressed.

The following error handling has been built into this method. All error responses are in JSON string format. No compression is applied to the response. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions
tag not provided	Arises when the tag querystring parameter is missing
page not provided	Arises when the page querystring parameter is missing
pagesize not provided	Arises when the pagesize querystring parameter is missing
page must be an integer	Arises when an invalid value is passed
pagesize must be an integer	Arises when an invalid value is passed
Various messages indicating a server error	Arises for all other server errors

/API/SEARCH_SUMMARY

This method allows media items to be searched based on provided search text. The search text passed to the method is applied to the media item's name, location, tags, and product names. This is a wide-ranging search. This method only returns a summary of the search that has been performed in the form of results counts for each Media Type in the system, i.e. Brochures, Case Studies, Videos, Presentations, Samples and Photos.

Input parameters (Querystring):

Name	Description
Containers (optional)	A "pipe" separated list of specialities to retrieve results for e.g. Kerb|Paving|Block Paving. If no value is supplied, results for all specialities will be returned.
q	The search term

Output

A JSON string of type "Search Summary" is returned (See appendix). Any properties containing null values are omitted from the response. The response is also compressed using Gzip compression.

The following error handling has been built into this method. All error responses are in JSON string format. No compression is applied to the response. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions
Search term not provided	Arises when the q querystring parameter is not provided.
Various messages indicating a server error	Arises for all other server errors

/API/SEARCH

This method allows media items be searched by search term, media type and optionally containers (specialities). The search text passed to the method is applied to the media item's name, location, tags, and product names. Results are returned as paged lists by page number.

Input parameters (Querystring):

Name	Description
Containers (optional)	A "pipe" separated list of specialities to retrieve results for e.g. Kerb|Paving|Block Paving. If no value is supplied, results for all specialities will be returned.
q	The search term
mediaType	The media type to restrict results to: Brochures CaseStudies – notice the lack of space here Photos Presentations Samples Videos
Page	The page of results to retrieve, e.g. if there are 100 results, and a pagesize of 25 is used, supplying a value of 1 will return the first 25 results
Pagesize	The size of a results page

Output

A JSON array of type "Search Result" (See appendix). Any properties containing null values are omitted from the response. The response is also compressed using Gzip compression.

The following error handling has been built into this method. All error responses are in JSON string format. No compression is applied to the response. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions
search term not provided	Arises when the q querystring parameter is missing
page not provided	Arises when the page querystring parameter is missing
pagesize not provided	Arises when the pagesize querystring parameter is missing
mediaType not provided	Arises when the mediaType querystring parameter is missing
media type not recognised - please check spelling	Arises when an invalid value is passed
page must be an integer	Arises when an invalid value is passed

| pagesize must be an integer | Arises when an invalid value is passed |
| Various messages indicating a server error | Arises for all other server errors |

/API/CAROUSEL

This method allows all assets for a specified media type to be returned. It behaves in a similar way to the /API/SEARCH method except no search term is being applied. Results are returned as paged lists by page number.

Input parameters (Querystring):

Name	Description
Containers (optional)	A "pipe" separated list of specialities to retrieve results for e.g. Kerb|Paving|Block Paving. If no value is supplied, results for all specialities will be returned.
mediaType	The media type to restrict results to: Brochures CaseStudies – notice the lack of space here Photos Presentations Samples Videos
Page	The page of results to retrieve, e.g. if there are 100 results, and a pagesize of 25 is used, supplying a value of 1 will return the first 25 results
Pagesize	The size of a results page

Output

A JSON array of type "Search Result" (See appendix). Any properties containing null values are omitted from the response. The response is also compressed using Gzip compression.

The following error handling has been built into this method. All error responses are in JSON string format. No compression is applied to the response. All erroneous calls return a HTTP 200 status code. Error JSON objects have a single property called "Error" with one of the following messages:

Message	Conditions
page not provided	Arises when the page querystring parameter is missing
pagesize not provided	Arises when the pagesize querystring parameter is missing
tag not provided	Arises when the mediaType querystring parameter is missing
media type not recognised - please check spelling	Arises when an invalid value is passed
page must be an integer	Arises when an invalid value is passed
pagesize must be an integer	Arises when an invalid value is passed

Various messages indicating a server error	Arises for all other server errors

WCF METHODS

The following methods have been implemented as WCF calls. The prefix of each method is as follows: /api/iDrive.svc, e.g. http://www.marshalls.co.uk/dam-svc/api/iDrive.svc/methodname

SENDEMAIL

This method allows an email to be sent from the iPad to a specified email address. The body of the email address contains the URLs of specified assets within the app that are selected by the user as part of the email sending process.

This method accepts a JSON string as input which is sent via a HTTP POST. The JSON object has the following properties:

Name	Data Type	Description
from	String	The from address of the email
to	String	The email address the email is being sent to
subject	String	The email subject
body	String	The content of the email
mediaRefs	Array of GUID	An array of media item references to include links to in the email

Output

If the email is sent successfully, a HTTP status code of 200 will be returned along with a message saying "Email queued".

The following error handling has been built into this method. All responses are simple text messages indicating the type of error. All erroneous calls return a HTTP 200 status code.

Message	Conditions
From required	Arises when the value hasn't been supplied.
To required	Arises when the value hasn't been supplied.
Subject required	Arises when the value hasn't been supplied.
Body required	Arises when the value hasn't been supplied.
From address not invalid	Arises when an incorrectly formatted email address has been supplied.
To address not invalid	Arises when an incorrectly formatted email address has been supplied.
Email failed due to server configuration: + specific message	Arises for all other server errors

APPENDIX

MEDIA ITEM SPECIALITIES

A media item can be tagged with one or more of the following specialities split into the following business areas:

Domestic

- Marshalls
- Stonemarket

Commercial

- Paving
- Block Paving
- Machine Lay
- Water Management
- Kerb
- Traffic Management
- Street Furniture
- Mortars & Screeds
- Walling
- Natural Stone
- PAS68
- Cycle Storage & Shelters
- Rhino
- Rail Landscapes
- Educational Landscapes
- Home Landscapes
- Retail Landscapes
- Topical
- Sustainability

JSON OBJECTS

The following tables detail the properties of each JSON response.

MEDIA ITEM

Name	Data Type	Description
mediaRef	GUID	The GUID reference of the media item
url	String	The URL of the asset on the server
thumbnail	String	The URL of the asset thumbnail if it exists
mediaType	String	The type of asset from the following values: Brochures Case Studies

		Photos Presentations Samples Videos
title	String	The name of the asset
aspectRatio	Float	The aspect ratio of the asset (if an image)
width	Float	The width of the asset (if an image)
height	Float	The height of the asset (if an image)
container	String	A comma separated list of media specialities the asset has been tagged with. A list of these can be found in the appendix.
location	String	The location of the asset, e.g. where a photo was taken
town	String	This property is a duplicate of "location" and has the same value assigned.
latitude	Float	The latitude of the asset (if applicable)
longitude	Float	The longitude of the asset (if applicable)
UpdatedDate	Datetime	The date and time the media item was last updated
tags	Array of String	An array of all the tags for the asset.
products	Array of Media Item Product	An array of the products that are associated with an asset.

MEDIA ITEM PRODUCT

Name	Data Type	Description
Code	String	The product code (if applicable)
Name	String	The name of the product
Colour	String	The colour of the produt (if applicable)
Texture	String	The texture of the product (if applicable)

SYNC RESPONSE

Name	Data Type	Description
updated	Array of Media Items	An array of media items as described in the next table.
deleted	Array of GUIDs	An array of the GUID media item references of items deleted from the server.

CONTAINER

Name	Data Type	Description
container	String	The name of the container (i.e. speciality name), e.g. Kerb, Paving, etc.
businessArea	String	The name of the business area the speciality comes under, i.e. Domestic or Commercial.

TAG SEARCH RESULT

Name	Data Type	Description
mediaRef	GUID	The GUID reference of the media item
mediaType	String	The type of asset from the following values: Brochures CaseStudies – notice the lack of space here Photos Presentations Samples Videos
url	String	The URL of the asset on the server
thumbnail	String	The URL of the asset thumbnail if it exists
width	Float	The width of the asset (if an image)
height	Float	The height of the asset (if an image)

SEARCH RESULT

Name	Data Type	Description
mediaRef	GUID	The GUID reference of the media item
mediaType	String	The type of asset from the following values: Brochures CaseStudies – notice the lack of space here Photos Presentations Samples Videos
url	String	The URL of the asset on the server
thumbnail	String	The URL of the asset thumbnail if it exists
width	Float	The width of the asset (if an image)
height	Float	The height of the asset (if an image)
title	String	The name of the asset
location	String	The location of the asset, e.g. where a photo was taken
latitude	Float	The latitude of the asset (if applicable)
longitude	Float	The longitude of the asset (if applicable)
UpdatedDate	Datetime	The date and time the media item was last updated

SEARCH SUMMARY

Name	Data Type	Description
Video	Integer	A count of the results for this media type
Presentation	Integer	A count of the results for this media type
Photo	Integer	A count of the results for this media type
Brochure	Integer	A count of the results for this media type
Sample	Integer	A count of the results for this media type
CaseStudy	Integer	A count of the results for this media type