that indicates what data the client can specifically request from the server **321**, while the AOI request returns any DEntries within the area of interest for the specified Layers (if they exist). In the example requests shown on FIG. **3**B, the desired Maplet is identified within a DEntry request by specifying the bottom-left Maplet coordinate. In addition, the DEntry request may include a layer mask so that unwanted Layers are not downloaded, a DEntry mask so that unwanted data Points are not downloaded, and zoom values to specify a zoom level for the requested DEntry. Once the device client has received the requested Maplet Index, the client typically then issues multiple DEntry requests to ask for specific DEntries (since the client knows all of the specific DEntries that are available based on the Maplet Index).

[0062] In this particular implementation, a collection of 20×20 A-level Maplets (representing a 1×1 degree square) is compiled into a Maplet Block File (.mbl). An .mbl file contains a header which specifies the offset and length of each Maplet in the .mbl file. The same 20×20 collection of Maplet index data is compiled into a Maplet Index file (.mbx). The .mbl and .mbx file structures are set forth in Tables B and C, respectively.

TABLE B

Address Offset	Offset	Length
0x000	Maplet #0 Offset (4 bytes)	Maplet #0 Length (4 bytes)
0x008	Maplet #1 Offset	Maplet #1 Length
0x010	Maplet #2 Offset	Maplet #2 Length
. . .	. . .	. . .
0xC78	Maplet #399 Offset	Maplet #399 Length
0xC80	Beginning of Maplet #0	
0xC80 + Size of Maplet #0	Beginning of Maplet #1	
0xC80 + Size of Maplet #0 + #1	Beginning of Maplet #2	
. . .	. . .	
0xC80 + Σ of Size of Maplets (#0:#398)	Beginning of Maplet #399	

[0063] In Table B, the offset of Maplet #0 is 0x0000_0000 since, in this particular example, the data structure is based on the assumption that the base address for the actual Maplet data is 0x0000_0C80. Therefore the absolute address for Maplet #0 data is: Maplet #0 Address=Base Address (0x0000_0C80)+Maplet #0 Offset (0x0000_0000), and additional Maplet addresses are calculated as: Maplet #(n+1) Offset=Maplet #(n) Offset+Maplet #(n) Length. If a Maplet has no data or does not exist, the length parameter is set to zero (0x0000_0000).

TABLE C

Address Offset	Offset (4 bytes)	Length (4 bytes)
0x000	Maplet Index #0 Offset	Maplet Index #0 Length
0x008	Maplet Index #1 Offset	Maplet Index #1 Length
0x010	Maplet Index #2 Offset	Maplet Index #2 Length
. . .	. . .	. . .
0xC78	Maplet Index #399 Offset	Maplet Index #399 Length

TABLE C-continued

Address Offset	Offset (4 bytes)	Length (4 bytes)
0xC80	Beginning of Maplet Index #0	
0xC80 + Size of Maplet Index #0	Beginning of Maplet Index #1	
0xC80 + Size of Maplet Index #0 + #1	Beginning of Maplet Index #2	
. . .	. . .	
0xC80 + Σ of Size of Maplet Indices (#0:#399)	Beginning of Maplet Index #399	

[0064] In Table C, the offset of Maplet Index #0 is 0x0000_0000 since, according to an exemplary embodiment the data structure is based on the assumption that the base address for the actual Maplet index data is 0x0000_0C80. Therefore, the absolute address for Maplet Index #0 data is: Maplet Index #0 Address=Base Address (0x0000_0C80)+Maplet Index #0 Offset (0x0000_0000), and additional Maplet index addresses are calculated as: Maplet Index #(n+1) Offset=Maplet Index #(n) Offset+Maplet Index #(n) Length. If a Maplet Index has no data or does not exist, the length parameter is set to zero (0x0000_0000).

[0065] FIG. **3**C and Table D (below), in combination, illustrate, by way of example only, a basic Maplet data structure. Generally, as noted above, the Maplet data structure can be said to include a Maplet Index (i.e. an index of the DEntries, each of which is representative of either an artifact or a label or both) together with data Points for each DEntry that actually form such artifacts and labels. In this example, each Maplet includes a Map ID (e.g. 0xA1B1C1D1), the # of Layers in the Maplet, and a Layer Entry for each Layer. The Map ID identifies the data as a valid Maplet, and according to one alternative, may also be used to identify a version number for the data. The # of Layers is an integer which indicates the number of Layers (and therefore Layer Entries) in the Maplet. Each Layer Entry defines rendering attributes and is followed by a list of DEntries for each Layer. The above forms a Maplet Index. For a complete Maplet, each DEntry contains a set of data Points (referred to herein as oPoints) or Labels). It will be noted that Layers can have multiple DEntries and the complete list of DEntries and Points are grouped by Layer and separated by a Layer Separator (e.g. hex value 0xEEEEEEEE). In this example, each Layer Entry is 20 bytes long, and a DEntry is 12 bytes long. However, the number of Layers, number of DEntries per Layer and the number of Points per DEntry depends on the map data and is generally variable.

[0066] Table D provides a high "byte-level" description of a Maplet for this example.

TABLE D

Data		Quantity	Total # of Bytes
Map ID		1	4 bytes
# of Layers		1	4 bytes
Layer Entries		# of Layers	20 bytes × (# of Layers)
DEntry of a Layer	×(# of DEntries in a Layer)	# of Layers	12 bytes × (Σ of the # of DEntries in each Layer) +
Points for DEntry of a Layer			4 bytes × (Σ of the # of Points in each DEntry in each Layer) +
Layer Separator			4 bytes × (# of Layers)