Currently:

based on the
publication

Limits of United States Coast Pilot Series

■	**1** Eastport, ME to Cape Cod, MA	■	**6** Great Lakes and their connecting waterways
■	**2** Cape Cod, MA to Sandy Hook, NJ	■	**7** California, Oregon, Washington, Hawaii, and Pacific Islands
■	**3** Sandy Hook, NJ to Cape Henry, VA	■	**8** Alaska: Dixon Entrance to Cape Spencer
■	**4** Cape Henry, VA to Key West, FL	■	**9** Alaska: Cape Spencer to Beaufort Sea
■	**5** Gulf of Mexico, Puerto Rico, and Virgin Islands		

a variety of information important to navigators of coastal and intracoastal waters and the Great Lakes. Issued in nine volumes, they contain supplemental information that is difficult to portray on a nautical chart.

Logos and Trademarks

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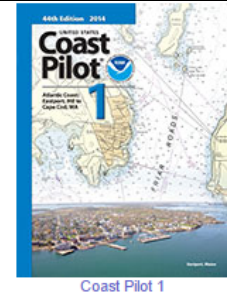
Coast Pilot 1 - 45th Edition, 2015

covers the coasts of Maine, New Hampshire, and part of Massachusetts, from Eastport, ME to Provincetown, MA.

This publication has been updated through: 05-APRIL-2015

Coast Pilot 1 complete [pdf]

Coast Pilot 1 (complete .pdf) [zip]

Coast Pilot 1

Chapter	Description	Alternate Downloads (Beta)*
Front	Title page, Preface and Table of Contents	[XML] [HTML]
Chapter 1	General Information	[XML] [HTML]
Chapter 2	Navigation Regulations	[XML] [HTML]
Chapter 3	Eastport to Cape Cod	[XML] [HTML]
Chapter 4	Quoddy Narrows to Calais, Maine	[XML] [HTML]
Chapter 5	Quoddy Narrows to Petit Manan Island, Maine	[XML] [HTML]
Chapter 6	Petit Manan Island to Jericho Bay, Maine	[XML] [HTML]
Chapter 7	Jericho Bay to Penobscot Bay, Maine	[XML] [HTML]
Chapter 8	Muscongus Bay to Cape Elizabeth, Maine	[XML] [HTML]
Chapter 9	Cape Elizabeth, Maine to Cape Ann, Massachusetts	[XML] [HTML]
Chapter 10	Cape Ann to Boston Harbor, Massachusetts	[XML] [HTML]
Chapter 11	Boston Harbor and Approaches	[XML] [HTML]
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Appendix A	Appendix A	[XML] [HTML]
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Weekly Record of Updates	Weekly Record of Updates	[XML] [HTML]
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*Not for Navigation

Quoddy Narrows to Calais, Maine

(1) This chapter describes the Maine and New Brunswick coasts from Quoddy Narrows through Lubec Channel, Friar Roads, Western Passage, and the St. Croix River to the head of navigation at Calais. Included in the text are discussions of the Maine ports of Lubec, Eastport, and Calais; the Canadian ports of St. Stephen and St. Andrews; several small harbors on Campobello Island; and Head Harbour Passage.

COLREGS Demarcation Lines

(3) The lines established for this part of the coast are described in **80.105** chapter 2.

Charts 13394, 13396, 13398

(5) The approaches to St. Croix River include Quoddy Narrows, Lubec Channel, Friar Roads, Head Harbour Passage, Western Passage, and Passamaquoddy Bay. The principal entrance is around the northern end of Campobello Island through Head Harbour Passage. This passage is deep and generally clear of dangers. The channel through Lubec Narrows is also used, especially at high water. The tidal currents are strong in both passages.

(6) **West Quoddy Head** the easternmost point of the United States, is bold and wooded. **West Quoddy Head Light** (44°48'54"N., 66°57'02"W.), 83 feet above the water, is shown from a 49-foot red and white horizontally banded tower on the eastern edge of the headland. A sound signal is at the light. The abandoned Coast Guard lookout tower near the summit of the ridge westward of the light is the most conspicuous landmark in the approach to Quoddy Narrows from seaward.

(7) Between West Quoddy Head and Calais, fluorescent red pyramidal markers define straight line segments and turning points of the United States-Canada boundary.

(8) **Quoddy Narrows (Quoddy Roads)** between West Quoddy Head and Canada's Campobello Island, is the usual anchorage for vessels seeking shelter or waiting for a favorable tide to pass through Lubec Narrows. The entrance, between West Quoddy Head and The Boring Stone, is about 0.8 mile wide and has a depth of 28 feet near the middle. Winds from east to south generate rough seas in the entrance.

(9) The anchorage affords shelter from northerly and westerly winds in depths of 12 to 25 feet, but is open to winds from the east and south, and protection from northeast gales is reported poor. The northern and western parts of Quoddy Narrows between West Quoddy Head and Lubec are full of shoals which partly uncover.

So far, the data structure is something like this:

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Chart Header

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Images

Paragraphs

\#

cpTags

text
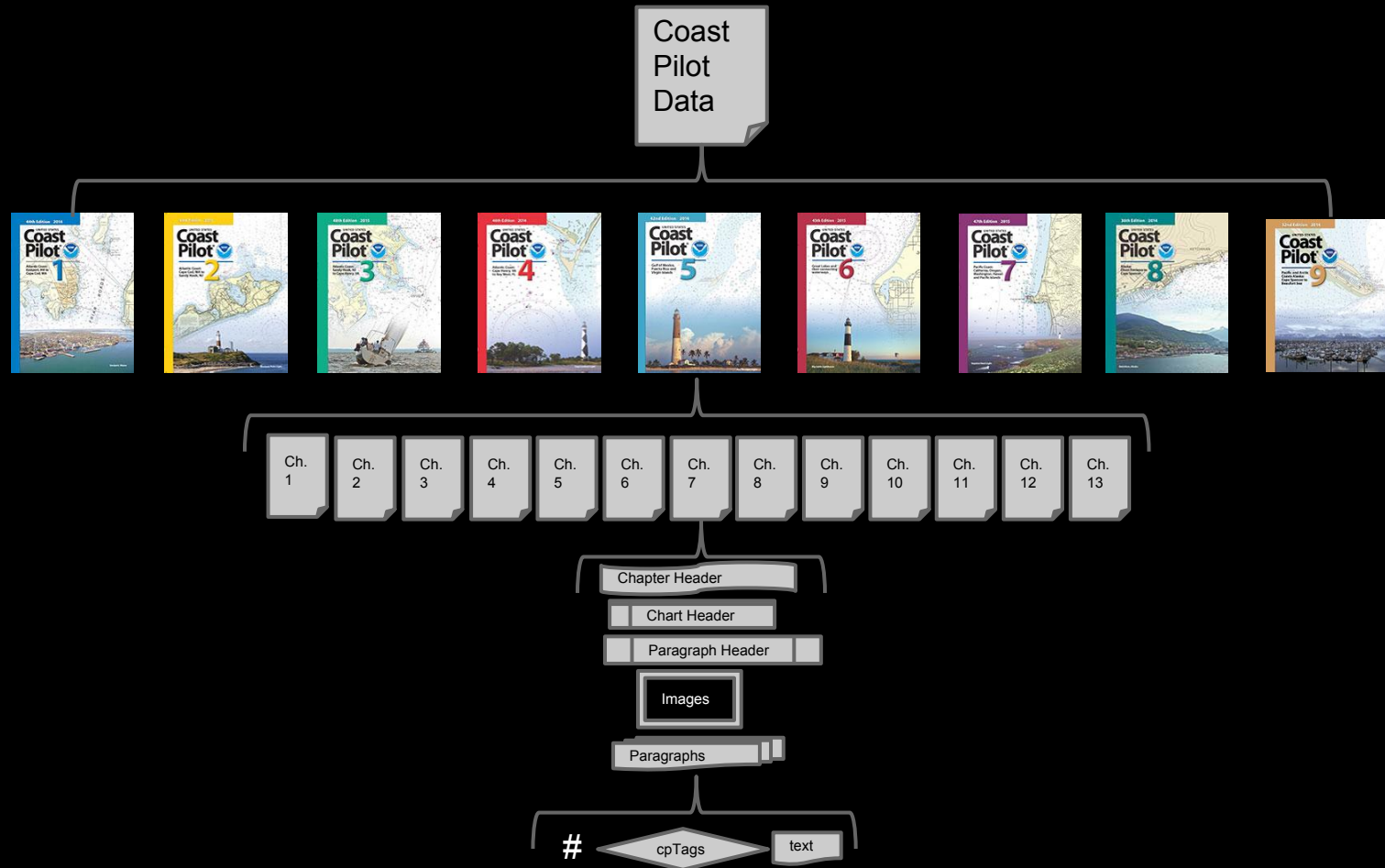
It's probably better not to think of Google Maps as a thing like a paper map. Geographic information systems represent a jump from paper maps like the abacus to the computer. "I honestly think we're seeing a more profound change, for map-making, than the switch from manuscript to print in the Renaissance," University of London cartographic historian Jerry Brotton told the Sydney Morning Herald. "That was huge. But this is bigger."

thinking differently

"There are a couple of steps (to make a Google Map). You acquire data through partners. You do a bunch of engineering on that data to get it **into the right format** and conflate it with other sources of data, and then you do a bunch of operations, to hand massage the data. And out the other end pops something **that is higher quality than the sum of its parts**." - former NASA engineer Michael Weiss-Malik

Ideally:

based on the data

"(Coast Pilots) contain supplemental information that is difficult to portray on a nautical chart."

rewrite:

Coast Pilots describe the features found along the coast and how to get to/access/use/avoid them.

Quoddy Narrows to Calais, Maine

(1) This chapter describes the Maine and New Brunswick coasts from Quoddy Narrows through Lubec Channel, Friar Roads, Western Passage, and the St. Croix River to the head of navigation at Calais. Included in the text are discussions of the Maine ports of Lubec, Eastport, and Calais; the Canadian ports of St. Stephen and St. Andrews; several small harbors on Campobello Island; and Head Harbour Passage.

(2) COLREGS Demarcation Lines

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(104) **St. Croix River** extends north-northwestward for 8 miles from the southern part of Passamaquoddy Bay, then turns westward between **Devils Head** and **Todds Point**. The channel is deep and comparatively clear as far as the turn, then is narrow and winding, and has a controlling depth of about 16 feet for some 3 miles to Hills Point (45° 09'53"N., 67°13'33"W.).

(105) A dredged channel leads from above Hills Point to Calais. In 1977, the midchannel controlling depth was 7 feet to Todd Point, about 4.2 miles above the mouth, thence 5 feet to Calais and St. Stephen on the Canadian side of the border, except for shoaling to 3 feet about 90 feet below the International Bridge at Calais. The channel is marked by lights and buoys, but is not maintained. The two buoys on the north side of the channel at **The Narrows** opposite **Whitlocks Mill Light 25** tow under during the strength of the tide. Local knowledge is necessary for the river above Whitlocks Mill.

(106) Small craft up to 40 feet in length can anchor in 14 feet on the west side of the channel just above Whitlocks Mill Light, but larger craft should anchor off Devils Head.
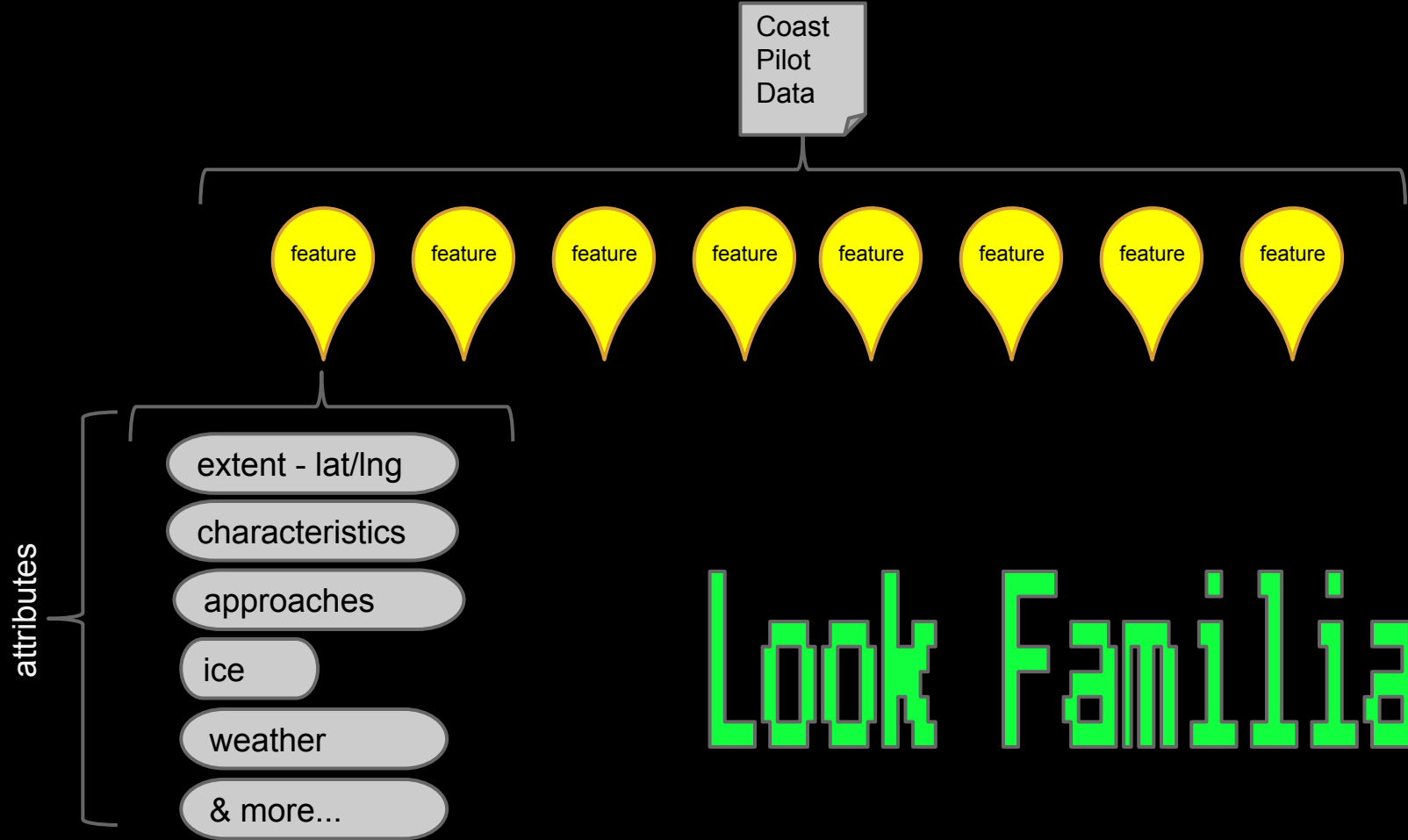
(107) The scattered remains of an old breakwater, which uncover 12 feet in spots, extend southeastward across the mudflats on the south side of St. Croix River for about 300 yards from near channel Buoy 19. The mudflats, which uncover 11 feet, are opposite **The Ledge** a village on the north side of the river about 9.7 miles above the mouth; caution is advised in this area.

(108) Ice

(109) St. Croix River above Robbinston is reported to be closed by ice for about one or two weeks in February. The channel to the oil wharf in Calais is usually kept open by the tug and barge bound there. Quoddy Narrows and

```xml
<feature name="St. Croix River">
    <extent>
        <direction>north-northwestward</direction>
        <dist unit="miles">8</dist>
        <from>the southern part of <place>Passamaquoddy Bay</place></from>
        <to>then turns westward between <place>Devils Head</place> and <place>Todds Point</place></to>
    </extent>
    <characteristics>
        <characteristic>narrow</characteristic>
        <characteristic>windy</char>
    </characteristics>
    <channelDepth>deep</channelDepth>
    <controllingDepth units="feet">16</controllingDepth>
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        <approach entrance="secondary">Lubec Narrows</approach>
        <approach entrance="principal">Friar Roads</approach>
        <approach entrance="principal">Head Harbour Passage</approach>
        <approach>Western Passage</approach>
        <approach>Passamaquoddy Bay</approach>
    </approaches>
    <ice>
        <closurePlace>Robbinston</closurePlace>
        <closureDuration>one or two weeks</closureDuration>
        <closureMonth>February</closureMonth>
    </ice>
</feature>
```

the NEW data structure would be something like this:

Coast
Pilot
Data

feature feature feature feature feature feature feature feature

attributes

extent - lat/lng

characteristics

approaches

ice

weather

& more...

Look Familiar?

Using GML - an XML grammar for expressing geographical features.

1. GML adopts the ISO notion of a feature. Features describe real world entities and are the fundamental objects used in GML.

2. Modeling Language and Interchange Format
   for geographic transactions on the internet

3. Application Schemas

4. Information can be semantically shared across various domains

5. GML data can also be easily mixed with non-spatial data.

6. GML is also an ISO standard (ISO 19136:2007)

7. Minimizes use of encoded attributes

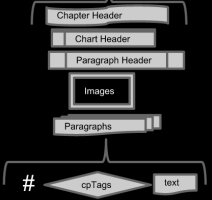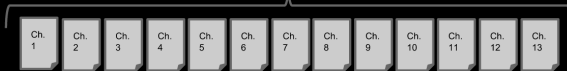http://www.ogcnetwork.net/system/files/GML_Best_Practices_Guide.pdf

Why?   -end result

problem:

implementation

how?

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cpTags text

?

Coast Pilot Data

feature feature feature feature feature feature feature feature

attributes

extent - lat/lng
characteristics
approaches
ice
weather
& more...

???
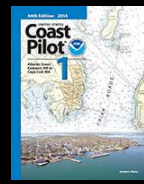
General steps

1. make a list of all the possible features to track
   a. Do this using the GNIS table, appendix, items marked with CP tags, headers
   b. this list will contain all information found about each feature. Some manual input will be required, but initial setup should be automated.
2. use the list of features to find and tag all the features in the document.
   a. the tags will simply reference the feature id from the list
   b. This step will ensure the "old way" of doing things is still viable...but will pave the way for future improvements, better data discovery and presentation.

Intermediate steps

1. *Normalize*/clean the database
    a. Get unique list of all headers – *standardize*
    b. get rid of end punctuation
2. Geo-reference data
    a. algorithms using GNIS
3. Add Chart numbers to all elements
4. Reuse ENC feature catalogue tags – *standardize*:
    a. Apply feature tags to cp_index tags
    b. Replace "formatting" tags (cp_bold, cp_italic)
        with feature tags
5. recode with fewer attributes