The Future of Almanac Services

An HMNAO perspective …

Journées Systèmes de Référence Spatio-Temporels
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This talk …

- History
- Examples of HMNAO Services
- Current practice
  - Paper
  - Web based
- Next generation data services
  - Web based
  - Mobile Apps
- Future services
  - What might they be …
Earliest texts considered to be almanacs go back to second millennium BCE – hemerologies and parapegmata

Babylonian, Greek and Islamic almanacs – zïjs and tables

Medieval almanacs – Regio-Montanus (1472)
History (II)

Early Astronomical Ephemerides

- La Connaissance des Temps ou calendrier et éphémérides du lever & coucher du Soleil, de la lune & des autres planètes, Picard (1679)
- Astronomische Ephemeriden, Hell (1757)
- The Nautical Almanac and Astronomical Ephemeris, Maskelyne (1767)
- Berliner Astronomisches Jahrbuck, Bode (1776)
- Almanaque Nautico (1792)
One of the location entry methods for Websurf – HMNAO’s dynamical data resource
Visibility of the new crescent moon for Ramadan 2014
Global and local circumstances for March 20th 2015
Total Eclipse of the Sun
Ground Illumination data for maritime activities
Current Services (I)

- **Paper**
  - User friendly
  - Archival
  - Expensive / Distributor chains

- **Web**
  - Need internet access
  - Lack of flexibility
  - Access to large amounts of data
  - Ephemeral
Current Services (II)

- Hybrid Publications
  - e-publications e.g. e-NA
  - pdf only publications e.g. UKAA

- Software
  - NavPac

- Paper + Web
  - AsA Online
Next Generation Services

- **Web**
  - SOAP / REST services
  - Access by flexible geographical tools / location sensitive software
  - Customisation of web pages on a per user basis

- **Mobile apps**
  - Services that do not require large amounts of data
  - Creative presentation of data
  - Location / Orientation sensitive
  - Augmented reality
Future Services ...

- Delivery of data by different means & methods
  - Youtube
  - Repackaging with other data e.g. e-Navigator
  - Make more use of data visualisation
  - More flexible licensing of data to make creation of new products simpler

- Standards
  - UT1/UTC – Leap Seconds
Visualisation of data (I)

See http://astro.ukho.gov.uk/data/tn/naotn75.pdf
Visualisation of data (II)
Thank you / спасибо

Any questions …