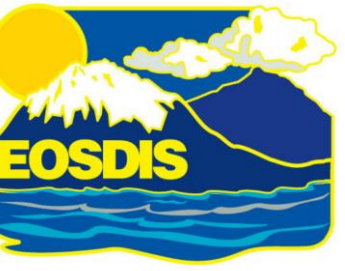


ADDRESSING USABILITY FOR DISCRETE USER GOALS WHEN ADDING NEW FEATURES TO THE WORLDVIEW APPLICATION



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Background

The Worldview (<https://worldview.earthdata.nasa.gov/>) web application from NASA's Earth Observing System Data and Information System (EOSDIS) provides a low friction solution for users of different scientific backgrounds to access near real-time satellite imagery, download full-resolution images, and access data products. Worldview has a wide user base with goals ranging from casual observation of a single day's imagery to time sensitive natural disaster monitoring or long-term scientific research using various layers and data products. It is essential to create features with usability on the forefront to address user needs, increase accessibility, and design a user interface(UI) with highly learnable elements.

Develop for Usability

Application features are built through a process of conceptual design, prototyping, development, and testing to continuously improve on what aspects of a user flow add value to the tool and revise those processes or elements which add unnecessary friction or complexity. Ease of use and integration with the existing UI is necessary for new features.

Comparison Mode

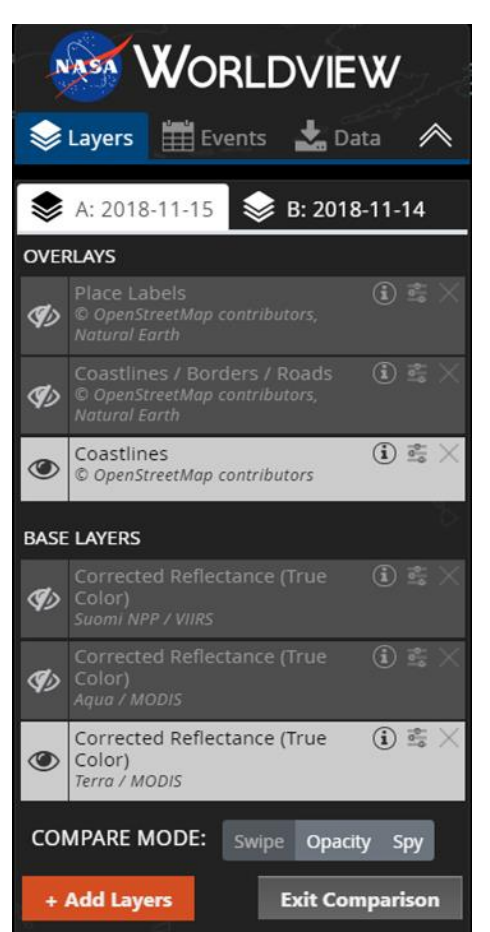
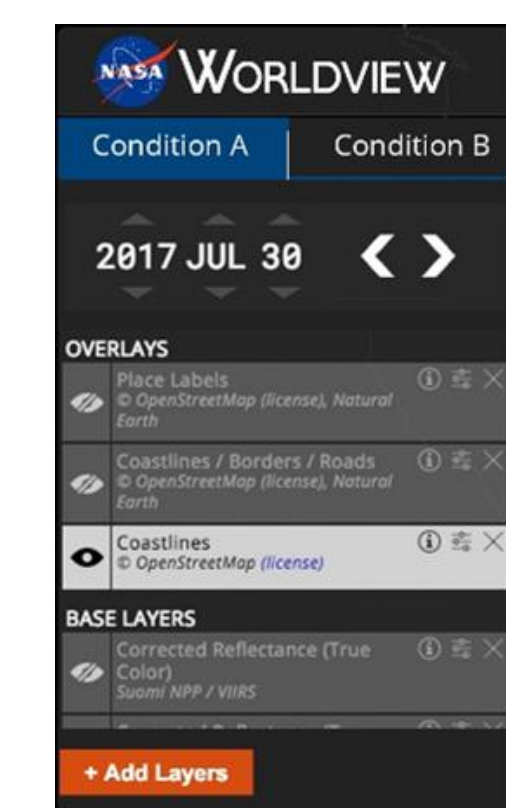
A case study shows the iterative design process throughout the development of UI elements in Worldview's newest feature **Comparison Mode**, which gives the user the ability to dynamically compare two imagery layers at the same geographic location with different days and/or satellite products.

The following aspects of this workflow are key to increasing usability:

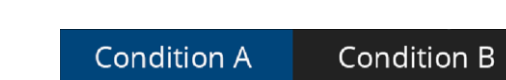
- Rapid iterative **prototyping** to quickly improve on working designs and start **developing** faster.
- User **feedback** to get direct insight from users and scientific teams familiar with the products being served.
- Instrumentation of UI element performance metrics to identify critical usage patterns.
- Evaluate and **improve** on learnability of existing features.

Sidebar

Feedback by users and developers is compiled throughout the process and discussed at regular design meetings. Changes are based on increased usability, congruency, and user experience.



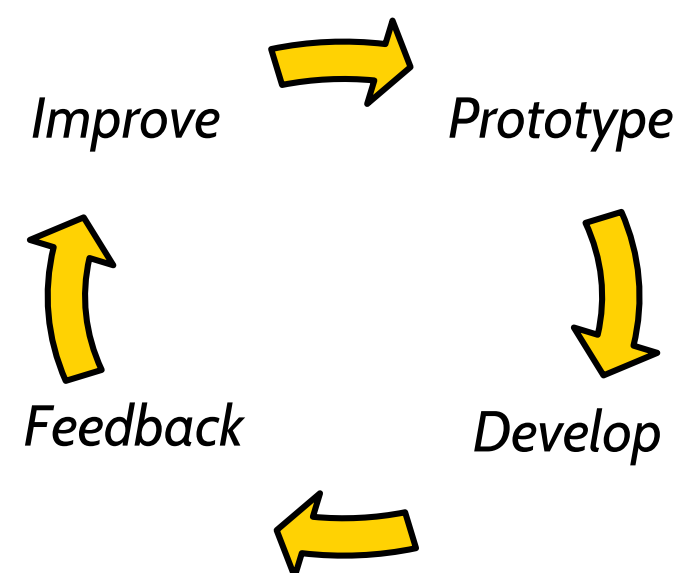
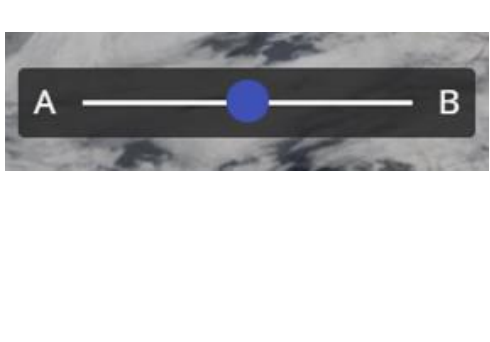
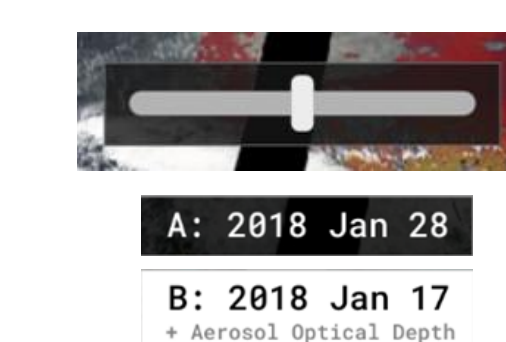
A/B Tabs



Comparison Dragger



Opacity Slider



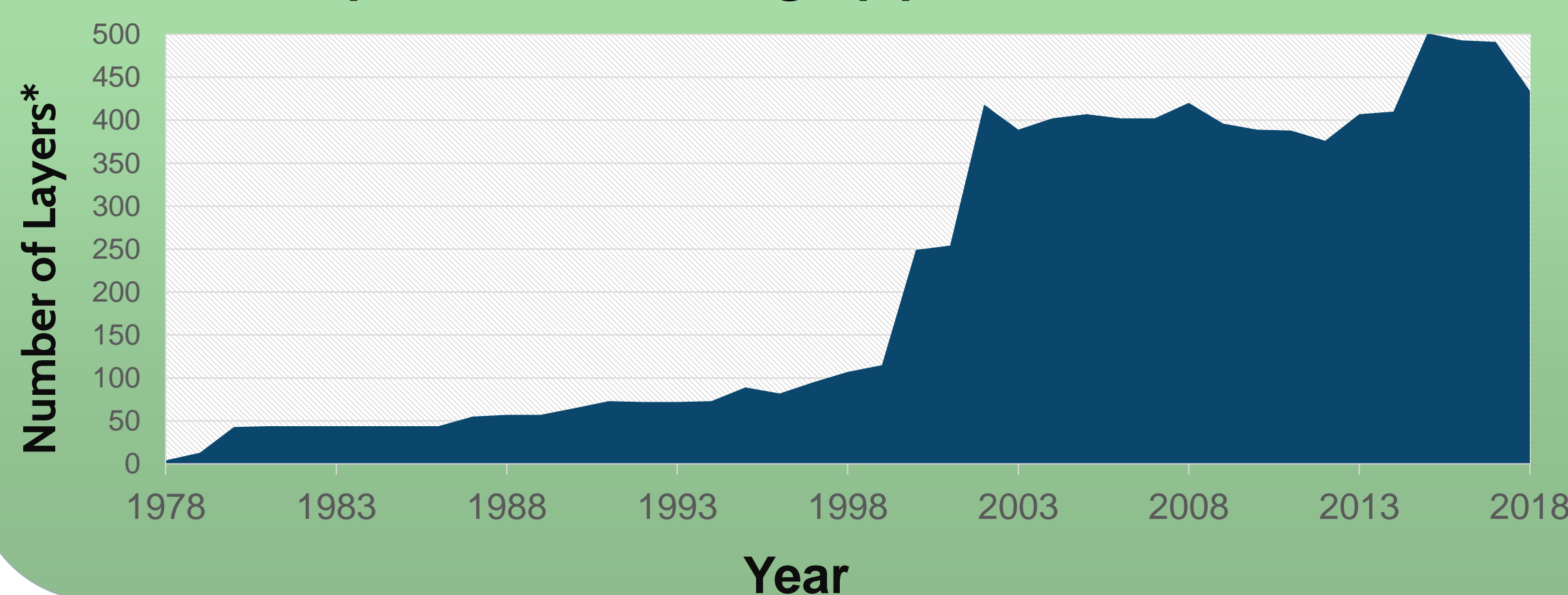
This development approach not only directs building of current features, but also guides future designs based on what users are interacting with and what technologies or browsers are being used most frequently.

More Coverage is Better

Worldview credits its successful growth for all users by displaying new imagery from the Global Imagery Browse Services (GIBS), which has an increasing archive of 700+ products serving full-resolution satellite imagery from NASA's Earth observing fleet. Historical coverage in Worldview for a small amount of layers dates back to January 1948. Available products and coverage have increased significantly over the past few years as new layers are being added on a constant basis.

* Multiple channels of the same product for some layers were consolidated as one entry for this chart

Availability of Satellite Imagery per Year on Worldview



Learn more at: <https://worldview.earthdata.nasa.gov/>