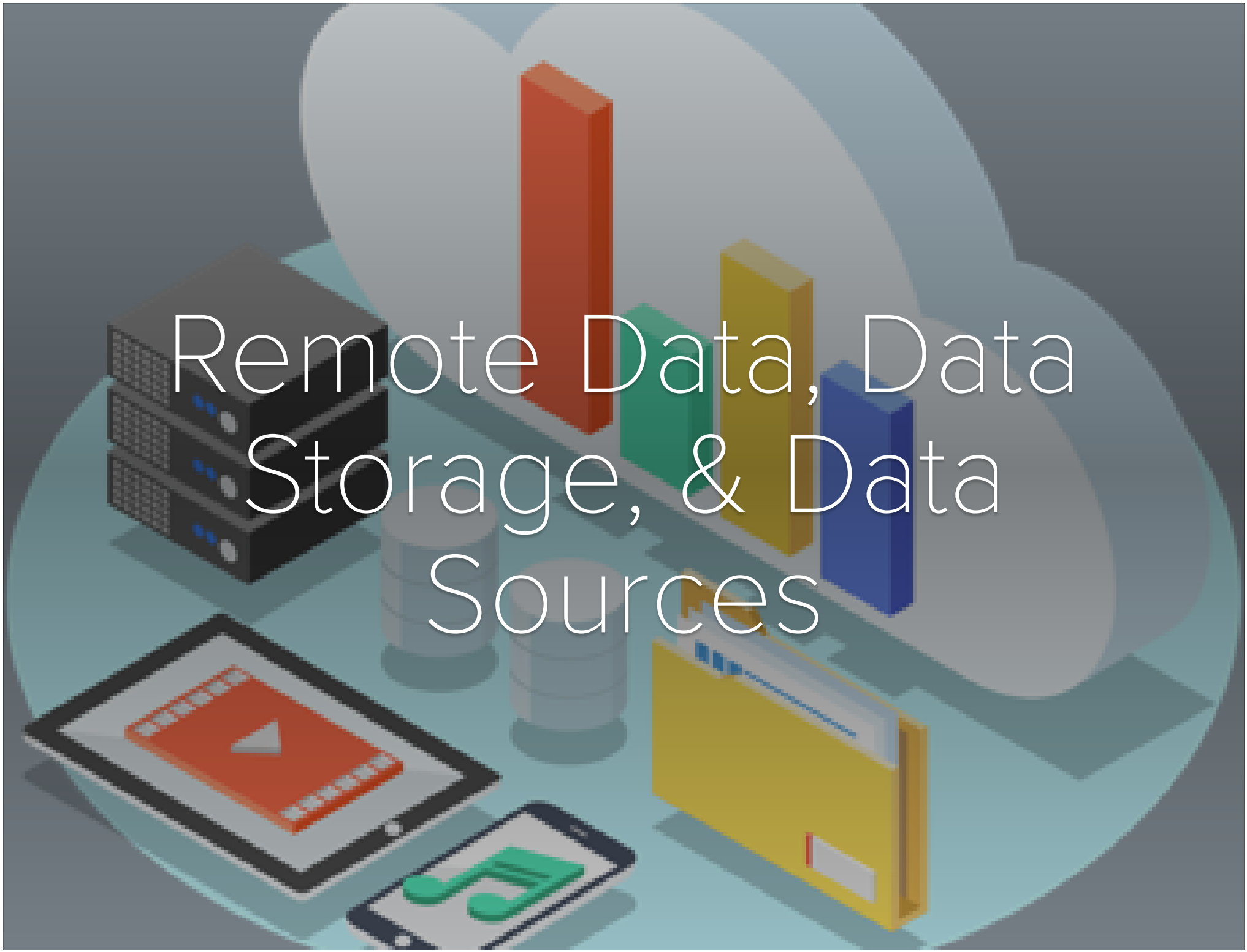
Remote Data, Data Storage, & Data Sources

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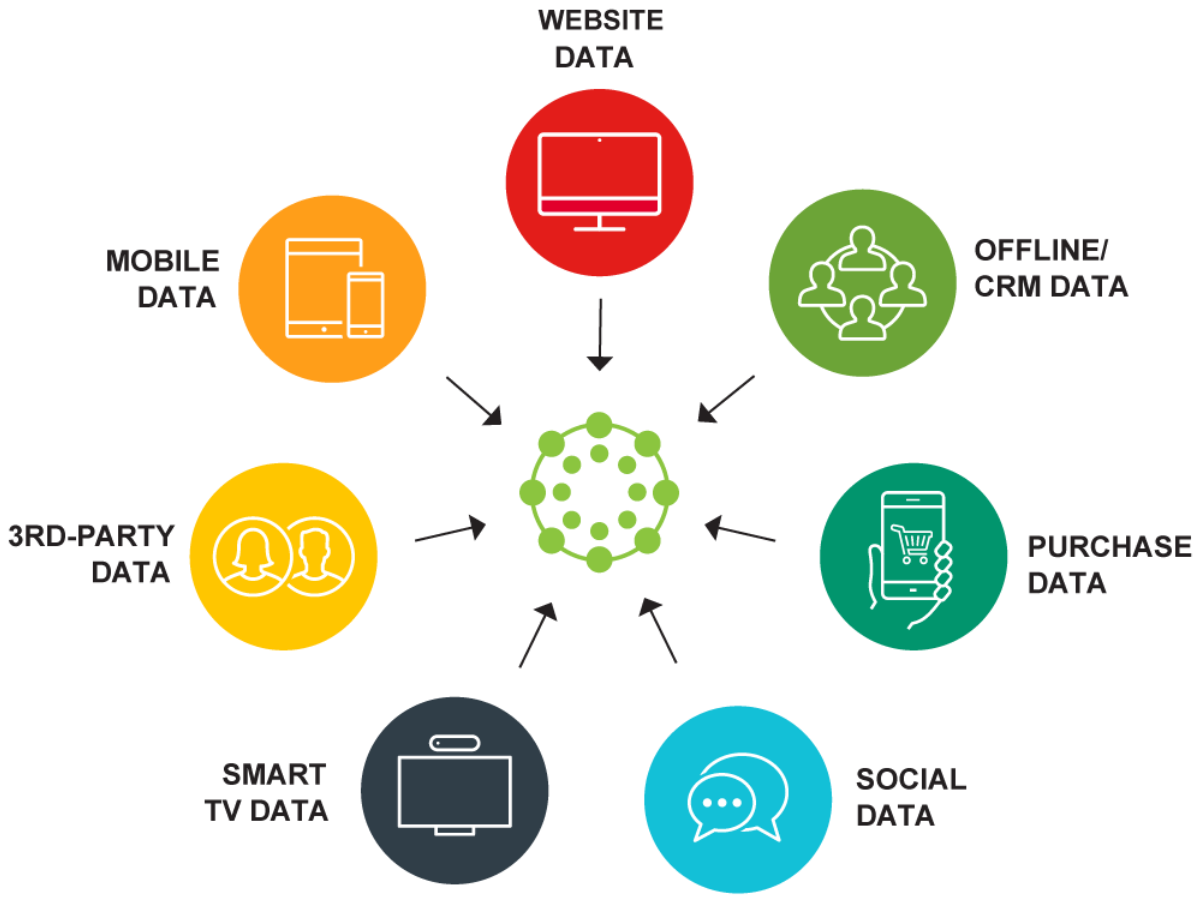
Date: May 25, 2019

Final Spark Page: https://spark.adobe.com/page/qjTP18mrkeGSf/



(Lotame, 2018)

What is a Data Source

A data source is the origin of a piece of data. For example, in the custom app by Mulan Lau, Penny for Your Thoughts, the data sources are the users who provide their name, username, password, and thoughts. Another example of a data source could be when a program crashes on a computer and the user is given the option to submit a crash report. In this case, the data sources are the computer and the program that crashed. (Techopedia, n.d.)

App Feature With Multiple Data Sources

One app feature with multiple data sources is the call feature in the Phone app. Whenever a user makes a phone call the phone gathers information about the phone doing the calling from the original phone, the phone being called from the desired phones number, and the cell towers that carry the signal between the two phones. This is a neat example of a feature with multiple data sources because all of these data sources must function properly in order for a call to go through. (Woodford, 2019)

(Anthill Magazine, 2016)

What is Data Storage

Data storage is the storing of data in an electronic sense. In other words, data storage keeps data that could be used by computers and other similar devices in an easily accessible location such as in files or blocks. One common method of data storage is using databases, SQL or NoSQL, which allow programs to easily push and pull data directly from the source (the database). (Hewlett Packard Enterprise, n.d.)

Data Storage Solution 1

Direct Attached Storage: Direct Attached Storage or DAS is a data storage solution that works by connecting directly to a computer. DAS includes external hard drives, thumb drives, and internal drives such as hard disk drives or solid state drives. Data saved in a DAS solution can only be accessed directly by the computer it's attached to. If a different computer wanted to access the data on that DAS solution then it would have to communicate with the computer that the DAS solution was directly attached to. DAS is high performance (primarily for the computer directly attached to it), easy to setup and configure, and low cost. However, DAS is low performance for computers not directly attached to it, has limited scalability, and has no backup system. One example of DAS in an app is the iPhone's Photos app. The photos taken by the phone camera or saved to the phone are stored only on the phone's local storage which is a DAS server. A user can save photos to a remote location through the use of a Photos feature, but without any further setup, photos are automatically saved to the phones DAS server. (NWN, 2018; Rubens, 2019)

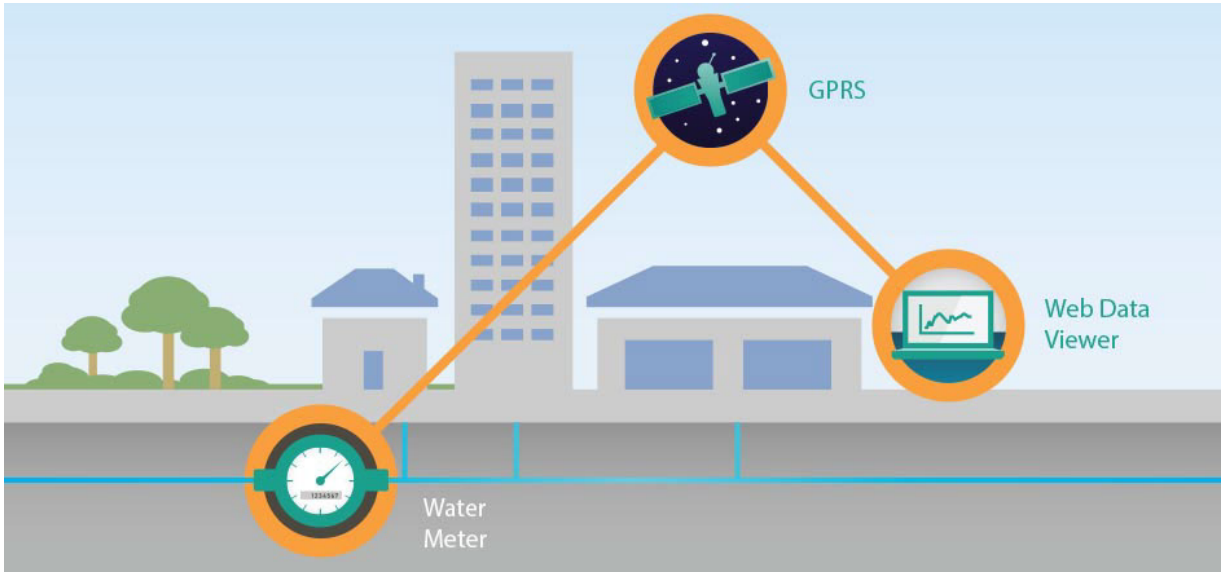
Data Storage Solution 2

Storage Area Network: A storage area network or SAN is a network created for the sole purpose of storing data. A SAN can consist of anywhere from a few to thousands of servers which connect to a host that gives the appearance that the data storage is directly attached to the device. SAN is highly scalable, high performance, has fast backups, and data protection. One example of SAN in an app is the Google app. Google probably has thousands of servers storing data which is accessed whenever a user makes a search through Google. These searches are generally completed relatively quickly indicating that Google probably uses a data storage solution that allows for a large pool of servers while maintaining high performance speeds such as SAN. (NWN, 2018; Robb, 2018)

Data Storage Solution 3

Network Attached Storage: Network Attached Storage or NAS is a device that connects to a data storage network and allows authorized users to push and pull data from a single location. NAS is flexible, scalable, low cost, securely centralized, simple to use, and is easily backed up. NAS also allows users to access data remotely. An example of an app that uses NAS could be the Goodreads app.

Goodreads allows users to leave feedback on books and other users profiles which requires the ability to easily push data to the Goodreads servers remotely. Goodreads also provides users with the data that currently exists on their servers which requires the ability to easily pull data from these servers remotely. NAS can push/pull data from its storage network remotely and its scalable which will allow for the continual addition of new books and new users. (NWN, 2018; Seagate, n.d.)



(Meterlogic, n.d.)

What is Remote Data

Remote Data is data that is taken from a location other than ones local device or database. One example is sending a drone with a thermometer and a camera up in the sky. The drone will take the thermometer into the air to measure the temperature of the air above the ground, the camera will record the thermometer, and a computer on the ground will be accessing the live feed of the camera. The data from the thermometer can then be input into a database in the computer on the ground. As the data source exists remotely from the local database, the data it provides is remote data.

Remote Data Example 1

One example of remote data in an app is the Weather app on the iPhone. The weather app accesses data from a weather facility near the user. The user can also choose to view weather conditions from a city of the users choice. The app then contacts the database of the weather facility nearest to the indicated location and pulls the weather conditions from there.

Remote Data Example 2

Another example of remote data in an app is the map feature in Yelp. Many of the businesses on Yelp have a map feature on their business Yelp page which allows users to view the business location on a map. This feature does this by using the Google Maps API and inputting the business address and sometimes the current user location. The result is either a pin indicating the geographical location of the business or a path from the users location to the business address.

Remote Data Example 3

A third example of remote data in use is The Flight Tracker app. The app gets data from airplanes as they fly from one location to another and continually updates the plane location in the app to allow the user to view the current location of the plane they're tracking in almost real time. (Almost real time because there is most likely still a small delay in the time the data of the airplanes current location is sent from the plane and received by the app on the users phone.)

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