Virtual Trail Tours - Team Ampersand
Cleveland Metroparks Hackathon 2018
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A school teacher with a classroom full of eager, energetic students does not always have the funding or the time to make a field trip to the metroparks happen. A married couple used to hiking in the woods together may be prevented from doing so by injury or circumstance. A cyclist doesn't always know whether a paved route is truly cycling friendly. For all of these reasons and more, virtual accessibility to the Cleveland Metroparks is a service valuable to the community in a manner compatible with the Metroparks "nature education" goals.

The concept of a virtual tour is already familiar to many users. Real estate agents, university recruiters, and even amusement parks already apply this technology to ensure that their prospective clients can get an "as if I were there" experience. This familiarity implies natural usability of the finished product, and further implies available software tools and an existing development community. All that is required is web development expertise to store and render the 3D images, provide a positive user experience, and enable curated content by Metroparks experts. That's where Team Ampersand comes in.

Our prototype is a public website with 27 panoramic images linked together in a virtual trail. This encompasses approximately half of the Henry Church Rock Loop in the South Chagrin Reservation. Audio clips recorded on-site play as the user walks the trail to provide an immersive experience -- but don't worry, they can be muted! Special content ("hotspots") can be provided fully integrated into the tour, including high resolution 2D images of a point of interest, a video of a waterfall or nearby event, or informational text or audio. An example image and video are included in the prototype.

A user with a Metroparks account can have their progress through the virtual tour tracked so that they can see at a glance which trails they have walked down or pick up where they left off. An administrator has tools at their disposal to add new "hotspot" content as described above. Popular views in the virtual tour may be identified, so that Metroparks experts know where to invest their time and effort.

The existing metroparks mobile app and website provides a great many useful features. This new service fits naturally into the Cleveland Metroparks online presences. Imagine that once a user selects "Trails" from the selection pane, they are given the trail's information as usual, but also a link to begin their virtual experience from right where they sit.