Former Virginia Tech President Charles Steger’s dissertation is 339 pages long. But it doesn’t take up an inch of shelf space at Virginia Tech’s Newman Library. That’s because it is available online at VTechWork’s Electronic Theses and Dissertations (ETD) collection.

VT was the first university on Earth to mandate that graduate students use an ETD system. Currently, the system is a package designed to obtain electronic approvals from committee members and the graduate school and deposit the thesis or dissertation at the library for electronic access and storage. Since its launch, the ETD publishing procedures at VT have been flexible and allow students to designate varying levels of access to their thesis or dissertation. People all over the world can query the database at VTechWorks and download the thesis or dissertation for viewing on their personal computer.

Professor Gail McMillan at VT’s Libraries, Computer Science Professor Ed Fox, and former Associate Provost for Graduate Studies John Eaton collaborated to launch this innovation. The ETD initiative began in the 90s with discussions across the library, departments and graduate school and with external collaborators at other universities. After two years of testing, Dr. Jinxia Sun became the first student to deposit a dissertation on April 5, 1996 (titled Characterization of Organosilicone Surfactants and Their Effects on Sulfonyleurea Herbicide Activity). Since becoming mandatory on January 1, 1997, over 27,160 ETDs have been added to the collection. This number includes some bound theses and dissertations that the library pulled off the shelf, scanned and uploaded to VTechWorks’ ETD collection.

The ETD initiative was the “most important and effective” change that made research more open, says Dr. Fox. Virginia Tech’s motivation to move from bound theses and dissertations to online versions was rooted in our mission as a land grant university to share the knowledge created by our scholars with the public. The ETD initiative has had four notable benefits: 1. Worldwide accessibility 2. Space savings at the library 3. Faster access 4. Enhanced content. Unlike a printed document sitting on a shelf, the ETD database archives diverse file types. Since VT formally launched the ETD initiative in 1997, hundreds of universities all over the world have followed suit.

The ETD initiative is about more than just storage. It teaches graduate students about the responsible conduct of research. “The vision for the ETD initiative is eternal. There will always be a need for a future professoriate that has the right skills for the job,” says Dr. Fox. When graduate students deposit their thesis or dissertation in the ETD collection, they are learning the technical skills required to create and manage files for sharing and long term storage. At the same time, they are participating in and contributing to the open culture scientists must practice in research.

The ETD initiative has certainly proven to improve accessibility to research. The data files for Glen R. Gibson’s dissertation titled War and Agriculture: Three Decades of Agricultural Land Use and Land Cover Change in Iraq have been accessed more than 3,500 times. The ETD initiative has also improved the richness of graduate students’ thesis or dissertation. From the beginning, students have taken advantage of the ability to deposit any kind of file that showcases the scope of their research. Unlike the dissertations of President Steger’s era, today, ETDs can contain color photographs, videos, websites, non-standard page sizes, raw data files or code. Dr. Fox’s Ph.D. student, Uma Murthy, created a tool that helps a user identify fish. She deposited her code and fish database along with her electronic dissertation so that future users can access the fish ID tool.

On January 1, 2017, VT’s ETD initiative will celebrate its 20th anniversary. As a virtual resource, it is awkward to throw a party for something that doesn’t have a physical form. There won’t be a party with cake
and balloons. But we can still celebrate. The best way to honor the achievement is to use it. Pull out your laptop, tablet or phone and browse the scholarly work of Virginia Tech’s community.

**Highlights of the ETD collection include:**

*Former VT President Charles Steger’s dissertation:*
“An integrated modular watershed planning model applied to the Upper South River watershed, Waynesboro, Virginia.”
[http://hdl.handle.net/10919/27427](http://hdl.handle.net/10919/27427)

*Astronaut Charles Camarda’s dissertation:*
“Development of advanced modal methods for calculating transient thermal and structural response”
[http://hdl.handle.net/10919/39810](http://hdl.handle.net/10919/39810)

*USDA Undersecretary Catherine Woteki’s dissertation:*
“Some nutritional considerations of lactose malabsorption in Mexican American children.”
[http://hdl.handle.net/10919/37854](http://hdl.handle.net/10919/37854)

*An example of video files in a dissertation:*
“A Contemporary Turkish Coffeehouse design Based on Historic Traditions” by Oral, Timur
[http://hdl.handle.net/10919/36551](http://hdl.handle.net/10919/36551)

*An example of a website as a dissertation:*
“bipolar[i].discuss();” by Walker, Megan Anna Hein
[http://hdl.handle.net/10919/23805](http://hdl.handle.net/10919/23805)

*Graduate student Uma Murtha’s fish identification tool:*
“Digital Libraries with Superimposed Information: Supporting Scholarly Tasks that Involve Fine Grain Information” by Murthy, Uma
[http://hdl.handle.net/10919/26866](http://hdl.handle.net/10919/26866)

*An example of color used in a dissertation:*
“An Urban Park Pavilion as a Sense of Place: A Community Theater and Water Taxi Terminal at the Foot of King Street” by Seong, Rok
[http://hdl.handle.net/10919/71283](http://hdl.handle.net/10919/71283)