

# Intercampus Communications Network (ICCN)

[iccn.uillinois.net](http://iccn.uillinois.net)

## ABOUT THE ICCN

The **Intercampus Communications Network (ICCN)** at the University of Illinois is a high-speed fiber-optic data network that connects all three University campuses – Urbana, Chicago, and Springfield – to the Internet. The ICCN offers the University system high-availability, complete redundancy, cost-efficiency, and access to **500 times more bandwidth** that was possible even a year ago.

## BUILDING AN ENVIRONMENT FOR RESEARCH AND DISCOVERY

As the University's external connection to the Internet, the ICCN allows academic, research, and administrative units at Illinois access to:

- **24 by 7 by 365 network support**, ensuring a high degree of reliability and long up-times for research-related services.
- **High reliability and performance telecommunications** among the three Illinois campuses and other University sites located throughout the state of Illinois.
- **High-speed access** to peer universities, including the Chicago and Springfield campuses, Indiana, Iowa, Northwestern, and Wisconsin; the BigTen Network; research networks, including Internet2, the National LambdaRail, the Metropolitan Research and Education Network (MREN), and the Energy Sciences Network (ESnet); research laboratories and centers, including Fermilab and CERN; and other agencies and companies located on the commercial Internet.
- **Better network reliability** for videoconferencing systems.
- **An added layer of protection and redundancy** against equipment failure.

For cutting-edge research in the sciences, humanities, and engineering, high-bandwidth, low-latency networks such as the ICCN are an essential tool for scholars and researchers, allowing them to:

- **Move** large data sets with greater ease.
- **Access** scientific instruments, facilities, or databases remotely.
- **Perform** real-time interactions with data-gathering equipment next door or around the globe.

## TECHNICAL SPECIFICATIONS

- **915 km of fiber** with an average latency of 3.5 ms.
- **Multicast** enabled.
- **Internet Protocol version 6 (IPv6) ready**, including version 6 multicast.
- First production **Multiprotocol Label Switching (MPLS)** network at Illinois.
- **Layer 2 transport services**, and **Layer 2 VPN services**.
- 24 currently active **Border Gateway Protocol (BGP)** sessions carrying over 300,000 routes.

## HOW CAN I LEARN MORE?

If you have any questions about how the ICCN can help you, your department or your unit on campus, please contact Tracy Smith, Operations Manager for the ICCN, by email at [tracys@uillinois.edu](mailto:tracys@uillinois.edu) or by phone at **(217) 244-2032**.

For more information about the ICCN, see the ICCN website:

<http://www.iccn.uillinois.net/>

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## **FREQUENTLY ASKED QUESTIONS**

### **I'm a researcher on campus – what can the ICCN do for me?**

Researchers at Illinois are now in a better position to collaborate with fellow researchers and institutions around the world thanks to the networking possibilities brought about by the ICCN.

For example, if you need to share a large set of data with colleagues at Fermilab in Batavia, or even further afield to CERN in Switzerland, you can now upload that data in the blink of an eye with the ICCN, which allows for numerous, simultaneous large streams of data both coming in and going out of the campus network.

If you're a biologist who needs to share or download vast amounts of genetic data; if you're a physicist who needs to upload data about sub-atomic particle collisions; if you're a biochemist who needs to videoconference with colleagues in Berkeley or Cambridge (Massachusetts or England); or if you're an ethnomusicologist who wishes to share the latest in world music with fellow scholars from around the world, the ICCN has the necessary network capacity to make that type of research, scholarship and collaboration possible.

World-class research universities require world-class networking capabilities. With the ICCN, we now have a world-class network to help us build the richest, most fertile environment for research and discovery at Illinois.

### **What do you mean by a large set of data?**

Terabytes and petabytes – how's that for a start? And the ICCN can accommodate more, if necessary.

### **How do I know if I'm using the ICCN?**

Chances are you already have. Since the ICCN is the Internet service provider for the Springfield and Urbana campuses, you've probably already used the ICCN and didn't even know it. As a "network of networks," the ICCN seamlessly integrates with our existing network architecture in order to take the work out of data transfer, making the process invisible to the end-user.

### **How can I learn more?**

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