



## St Bede's College

Australian school supports innovative learning programs, 1:1 computing, and STEM — with Xirrus Wi-Fi network.



*With the Xirrus network, administrators and campus safety personnel anywhere on campus can use their iPhones to view real-time and recorded video from more than 40 video surveillance cameras.”*

David Cracknell, Deputy Principal for ICT and Infrastructure  
St Bede's College

Located in Melbourne, Australia, St Bede's College is a Catholic secondary school for boys in years 7-12. The college has 1,550 students and 180 teachers, administrators and support staff.

As part of its tradition of academic excellence, the college encourages student-led learning. “Students learn better by doing something themselves than by watching a teacher,” says David Cracknell, Deputy Principal for ICT and Infrastructure. Student-led learning requires two ingredients: fast, reliable Wi-Fi and a computer for every student.

### HIGHLIGHTS

- Supported the college's shift from teacher-led to student-led learning
- Enlivens science, technology, engineering and math (STEM) education
- Adapts to changing needs by enabling the ICT team to configure radios for 5GHz or 2.4GHz operation with a click in the management console
- Enables adoption of the 802.11ac Wave 2 standard with no capital expense; upgrade requires only a few software clicks

### Wi-Fi — Foundation for 1:1 Computing

The college needed a Wi-Fi solution that could connect all devices in a classroom at the same time, delivering consistently fast performance. “Most wireless solutions we looked at couldn't do the job,” Cracknell says. Then he discovered Xirrus Wi-Fi, designed specifically for high-density environments like schools. Each Xirrus access point can contain up to eight radios. “We saved the cost of buying and managing a centralized physical controller because each Xirrus access point acts as its own controller,” says Cracknell.

Now every classroom and office has Wi-Fi. St. Bede's provides notebooks for students in years 10-12 and iPads for students in years 7-9. Many students and staff bring three or more devices to school, including smartphones, tablets, notebooks and wearables.

### New Ways of Learning

Reliable, high-performance Wi-Fi engages students and energizes the classroom. Teachers use Google Apps to distribute articles and collaborate on assignments with individual students, groups or the entire class. Students enjoy watching educational videos from a subscription-based cloud service. “Even when many students stream educational videos at the same time, the Xirrus Wi-Fi network doesn't falter, even a little,” says Cracknell. Students include video in their reports and presentations, which they submit over the Xirrus network to Google Drive. When learning about art, for instance, a student might use Google Drive to store and share a recording of himself explaining features of a painting as he circles and describes those features. Teachers can view progress on student work in real time and give timely feedback.



“ Even when many students stream educational videos at the same time, the Xirrus Wi-Fi network doesn't falter, even a little.”

David Cracknell, Deputy Principal for ICT and Infrastructure  
St Bede's College

Recently St Bede's year 8 and 9 students joined NASA astronaut Douglas Wheelock in an exciting video conference. “The wireless throughput was essential to the success of the video session and the educational outcomes,” Cracknell says. “The Xirrus Wi-Fi performed flawlessly.”

Xirrus Wi-Fi also enlivens science, technology, engineering and mathematics (STEM) education. Students develop coding and game design skills on their wireless devices. A group of tech-savvy students records instructional videos about ICT topics, uploading the videos to Google Drive for on-demand viewing by teachers and staff. In 2016, a team from St Bede's qualified for the world finals of Formula1 Technology Challenge in Schools, using wireless notebooks and the Xirrus network as they designed a miniature F1 car.

### Access to Video Surveillance Feeds From Anywhere

The Xirrus network plays a role in campus safety as well as learning. “With the Xirrus network, administrators and campus safety personnel anywhere on campus can use their iPhones to view real-time and recorded video from more than 40 video surveillance cameras,” says Cracknell. Not having to return to the office to view video enables staff to more quickly learn about and respond to events.

### Simple Management

The ICT team used Xirrus Management System (XMS) to configure most radios to operate at 5GHz, which supports more simultaneous connections than the 2.4GHz band. Teachers and students have come to depend on Wi-Fi, and XMS also makes it easy to quickly find and remediate any issues. If XMS shows that several access points in the same area are down, for example, the ICT team knows that the problem is likely with the switch, not the Wi-Fi. About twice a month Cracknell helps a distraught student find a misplaced iPad or notebook by using XMS to locate the classroom where the device last connected. Xirrus Application Control helps the ICT team understand each application's bandwidth demands. If demand ever starts to outstrip bandwidth, Cracknell will use Xirrus Application Control to give priority to learning applications.

### Adaptive Wi-Fi = Long Investment Life

When the 802.11ac Wave 2 is introduced, St. Bede's can adapt without the expense of purchasing and deploying new access points. Just a few software clicks will upgrade the existing Xirrus access points to support the new standard.

Cracknell concludes, “The best infrastructure is invisible — like underground pipes. Our Xirrus Wi-Fi network operated invisibly and reliably for five years, and we look forward to the next five.”

World Headquarters  
Riverbed Xirrus  
680 Folsom St., 6th Floor  
San Francisco, CA USA  
Tel: +1 (877) 483-7233

Sunnyvale Office  
Riverbed Xirrus  
525 Almanor Ave., 5th Floor  
Sunnyvale, CA 94107 USA  
Tel: +1 (408) 664-3000

EMEA Office  
Riverbed Xirrus  
One Thames Valley House  
Wokingham Road, Level 2, Suite 250  
Bracknell, RG42 1NG UK  
Tel: +44 1344 401900