

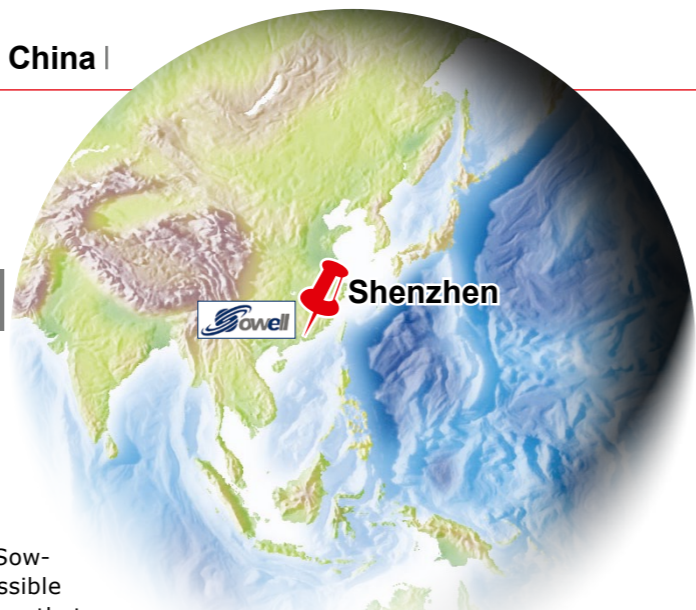
IPTV is Future



■ General Manager Eagle Chain in Sowell's showroom with one of the company's success receivers.

- **Already operating the first IPTV project**
- **3D planned for the future**
- **Integration of TV reception with IPTV**
- **60% of all Sowell receivers are already HD**

Receiver Manufacturer Sowell Expands Into IPTV



What does the future of TV reception look like? What type of transmission technologies will be used in the future? Eagle Chain is the General Manager of receiver manufacturer Sowell and has been thinking quite a bit about the future of his company. What kind of receivers does the market want?

What kind of receivers will Sowell manufacture? Of all the possible future scenarios, he chose one that he believes will be the most successful: IPTV.

It would require high-speed Internet connections, although these days

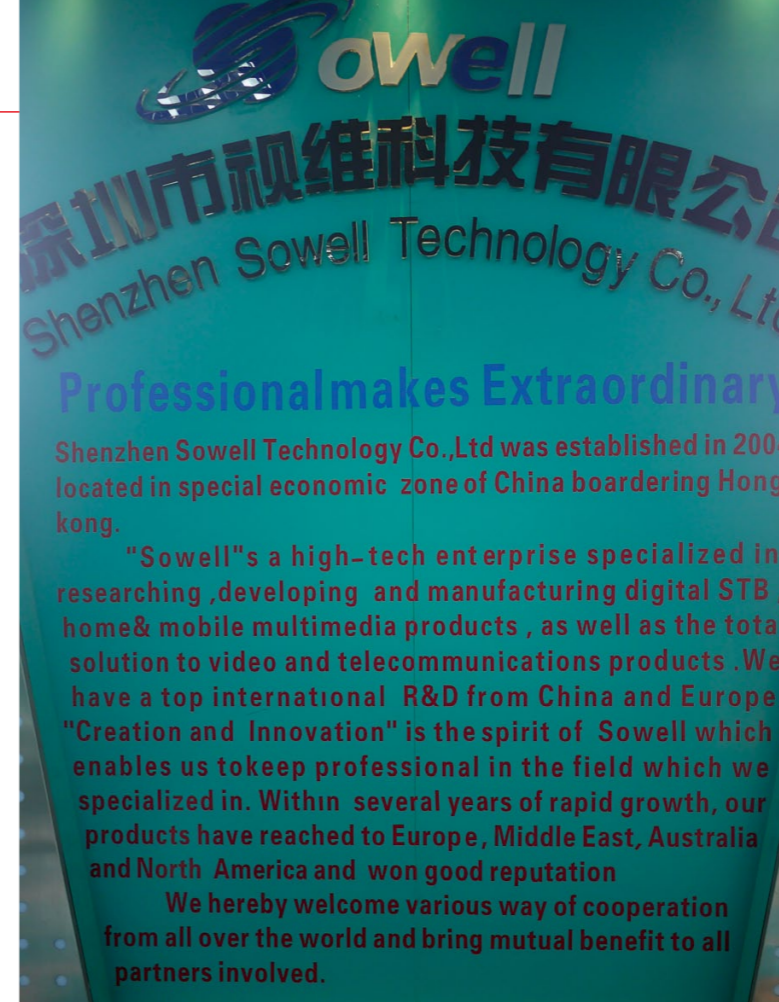
it's becoming more and more available around the world. "I was just in Africa and played around with our IPTV box", reveals Eagle Chain. His results: when there are Internet connections, they



深圳市视维科技有限公司
Shenzhen Sowell Technology Co., Ltd.



■ Receptionist Lichan Li greets visitors in a friendly way.



■ An information board invites cooperation with Sowell.

are generally fast enough for TV via the Internet. Internet access is not as yet available throughout the continent, but it's only a matter of time. "I have good expectations for our company in this market", he continues as he establishes why he even flew to Africa.

In addition to learning more about this market that's hardly been penetrated, it was also the perfect opportunity to test his IPTV boxes and check out his self-developed technology. "We've recently started keeping an eye on an IPTV network in Bangkok, Thailand. We designed a complete system for a provider there including the IPTV receivers for end users", we learn from General Manager Eagle Chain. "At the moment the network is laid out to handle up to 50,000 users; we could set it up to supply up to 500,000 users with IPTV." It's a turnkey solution developed by the Sowell engineers. "The system is carrying 45 SD channels and 5 HD channels."

But Sowell doesn't see itself as just a supplier of IPTV solutions for providers in the future, they also see an interesting future as a supplier of independent IPTV receivers. "The number of expatriates is always increasing and more often than not it's unlikely that they'll be able to see their TV channels via satellite from home. IPTV is ideal for this group."

As an example, Eagle Chain points out two IPTV Chinese-language services. "Here in China the IPTV service from www.pptv.com is very popular and for those Chinese people living in the USA it's the IPTV provider www.kylintv.com." For other language groups there are just as many providers and with the consistently increasing number of Internet providers appearing, the interest in this type of programming service also continues to increase. "We're working on developing very comfortable receivers for these IPTV providers." In other words, the user no longer has to access these channels through his laptop and make due with a small monitor; instead he can use a standalone IPTV receiver and that big-screen TV in his living room.

IPTV isn't the only thing that Sowell is looking at for the future. "We're also

SOWELL
OEM Receiver Manufacturer, China
www.sowell-tech.com

Company Details

Engineers in Research & Development | Total Number of Employees
0.....50.....100

Average Turnover (Previous, This, Next Year Estimates)
0.....25.....50 Mio US\$

Production Certificates
DVB
Main Products
Receiver for DVB-S/S2, DVB-T/T2, DVB-C and ISDB-T, Receivers with 3D graphics, IPTV Boxes, Linux Boxes

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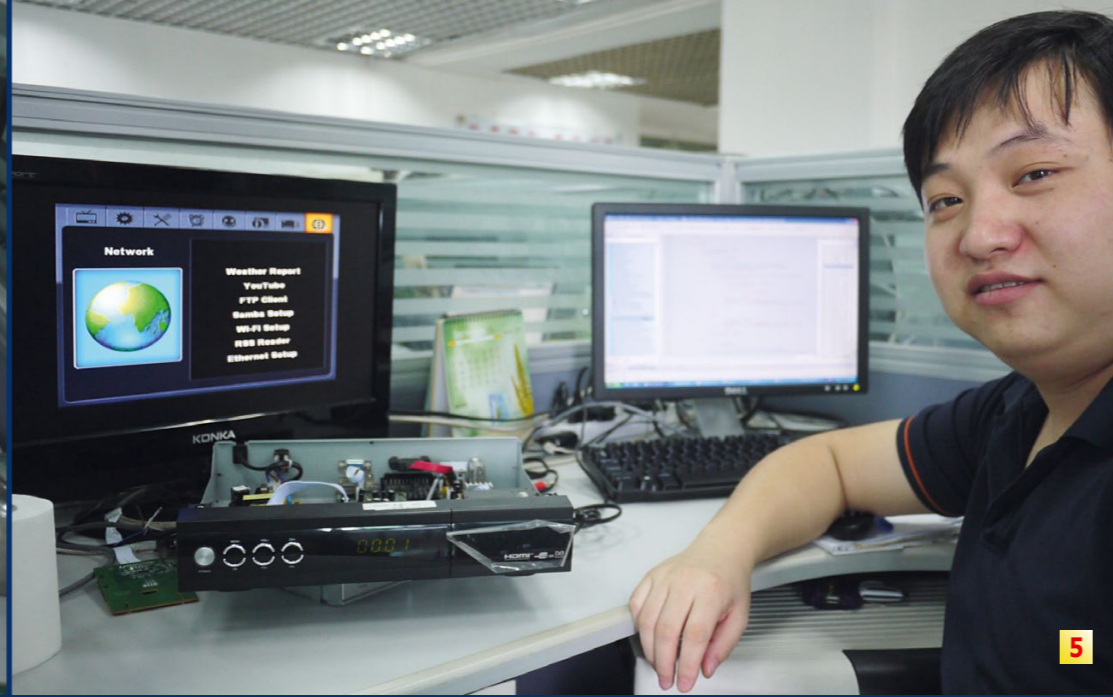
www.TELE-satellite.com/TELE-satellite-1101eng/sowell.pdf
www.TELE-satellite.com/TELE-satellite-1205eng/sowell.pdf

Receiver manufacturer Sowell's offices can be found in this office complex in Shenzhen; actual production takes place a half hour's drive away in Bao'an.





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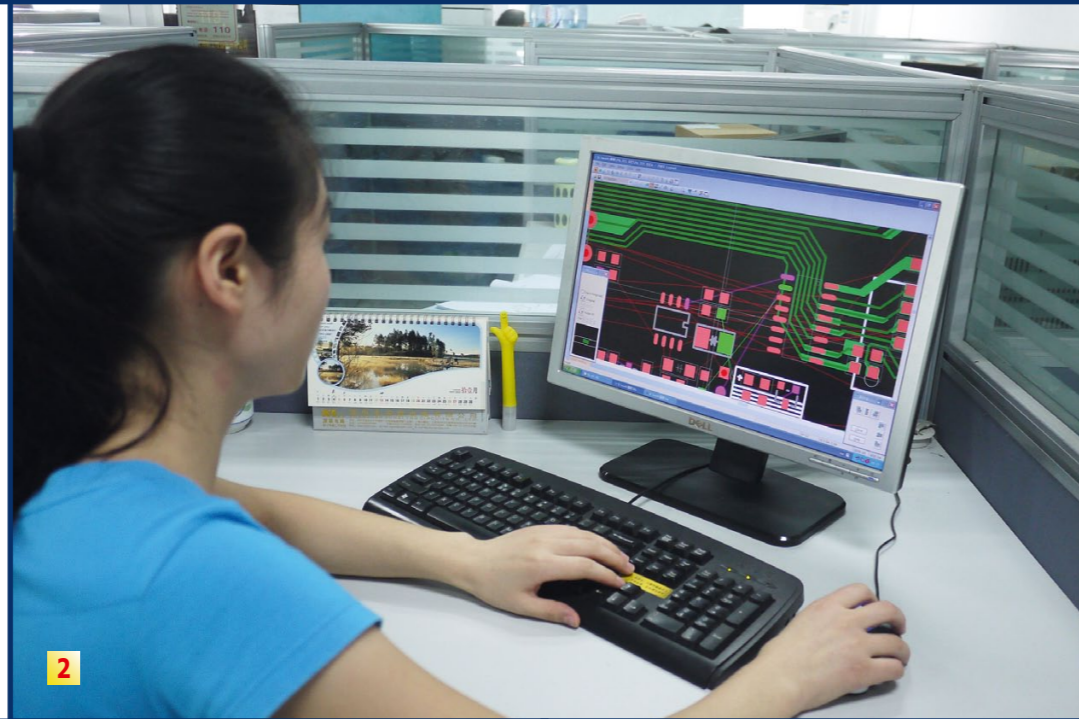
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preparing for 3D; for the OSD menus as well as for the presentation of TV programs." The latter involves a software solution where 2D content is converted into 3D content. "This product will become available from us in the 3rd quarter of 2012", promises Eagle Chain. Naturally Sowell is also working on incorporating the Android operating system into their receivers. "This is the best way to combine TV reception and the Internet."

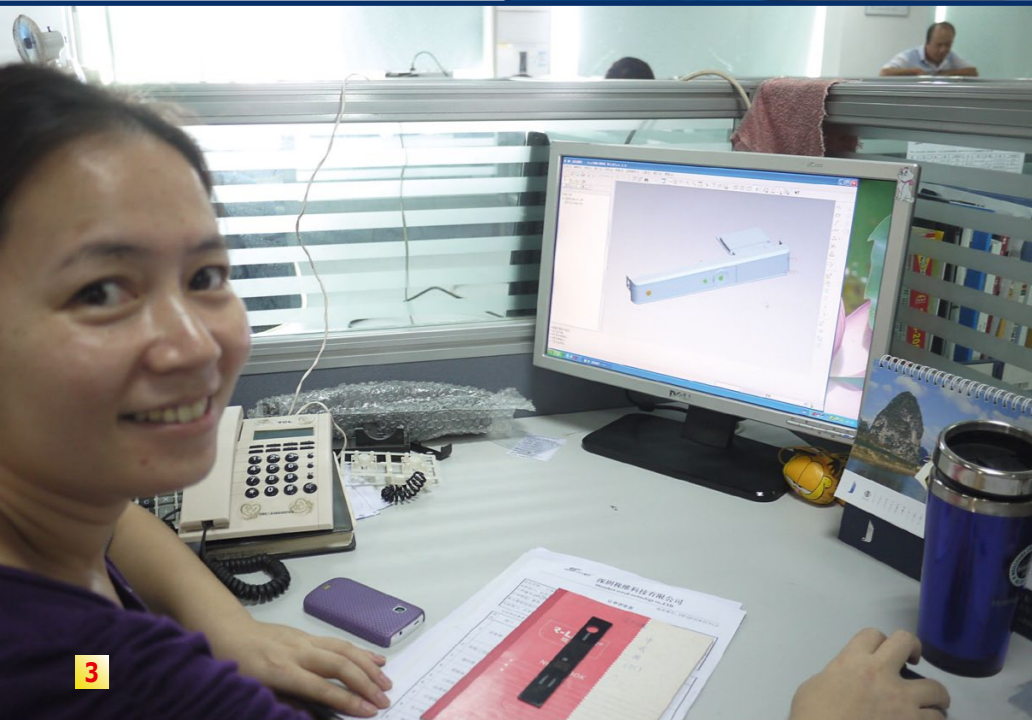
With this the circle is now complete; Eagle Chain is convinced that the Internet will play a larger and larger role in the future. You can't disagree with it; Sowell is in the process of developing the right products for the future.



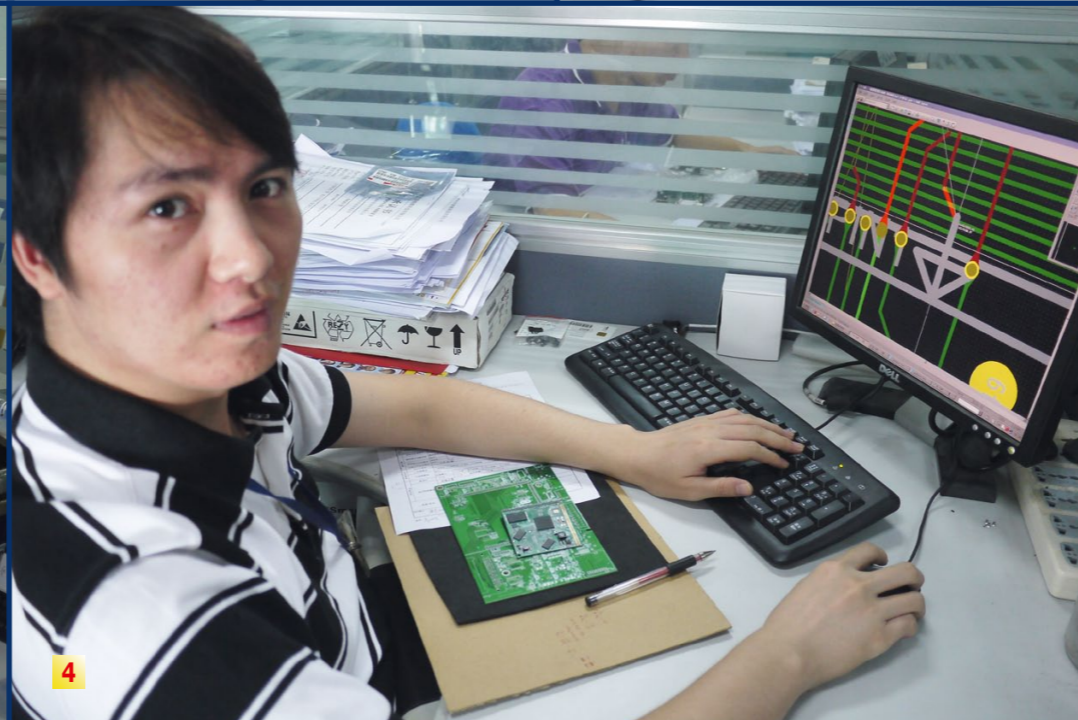
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1. Engineer Lin Ling is Sowell's 3D project team leader. He and his team are developing the hardware for the new 3D receivers. "One of our engineers works in Germany and together with us is developing the 3D software."

2. One of the employees in the large Sowell R&D Team. She is one of the PCB designers.

3. Hui Liu is a member of the design team that deals with everything visual including the receiver front panels. Here we see how Hui Lin redesigns a front panel for an OEM customer.

4. Total concentration: Roy Lin is the software engineer team leader; they are currently working on the Realtek Chipset that will be installed in the new IPTV receivers. The TV monitor in the background is displaying the OSD of this IPTV sample unit.

5. Linux receivers are still in high demand. Bing Nie is Project Manager for Sowell's Linux-based HDTV receivers.

6. Nothing tops a test of the actual product. Jiang Tingshan is one of the four engineers in the test center. Here we see him as he checks the scan function of a new software version.

7. Sometimes changes to the hardware are necessary during development. This is done here. Even the verification of technical data takes place here in the instrument room.