Is the internet always buisy?

The internet has become a part of our everyday lives regardless of age. Many people experience that the internet is occupied when several people are simultaneously on the internet. Ordinary routers are not able to prioritize traffic on the internet, but allocates traffic to the users with the biggest demands for bandwidth. SmartShare Systems bandwidth managing products allocates all users an optimal part of the bandwidth, and hence giving them a good user experience.

Most housing associations today have a common internet connection, which covers all the residents needs. Some are just surfing the internet or checking their e-mails, while others are downloading movies and music.

It is often a good idea to have a common internet connection, instead of each resident buying his or her own ADSL connection from an ISP. With a common internet connection, you have a better chance of getting a much faster internet connection for less money.

Stable and ready for the future
When you have a common internet connection, there will be requirements for how this connection should function and be used. One thing is certain: It must be stable and always available. Another requirement is, that one user should not be able to "starve" other users, so that the internet for them seems inaccessible. "This problem is exactly what the SmartShare products resolve, " states Martin

Lohse from EL Design, who has installed network solutions in many housing associations. "A Smart-Share can be connected to all types of networks without changing them, and the solution is secured for the future so you are able to upgrade, for example, from an ADSL/VDSL-based internet connection, to a faster fiber connection if you need it."

Some ISPs offer a solution for housing associations, where the available bandwidth is divided evenly between the residents, so everybody are guaranteed an even part of the total bandwidth. This solution is fine if all users use the internet equally, and at the same time – but this is never the case. So with these kinds of solutions, a large amount of accessible bandwidth will remain unused.

A professional and maintenance free solution
"Stableness and simple maintenance are also important parameters when choosing network equipment for a housing association. SmartShare

> **Vennemindenet** - a network union on Østerbro
> "We were certain that a fibre connection was the solution to our problems, but after installing a SmartShare, we have been able to postpone this decision indefinitely."
>
> Thomas Dahl, www.vennemindenet.dk

Systems know how to solve this," Martin Lohse explains. "They have studied and analyzed why the internet in housing associations at times, is unstable, and have concluded that in most cases, the internet router, which is the central part of the network that allocates the bandwidth among the residents, is the problem."

A good experience for everybody
SmartShare Systems have developed a unique bandwidth managing product, that uses a technology called User Load Balancing. This technology dynamically allocates maximun bandwidth between users, so that the common internet

"Over time, we have tried many different routers, amongst these monoWall, but after we switched to SmartShare we have had no problems at all. It is easy to maintain, and secures a fast internet for all residents," states Jakob Nygård from A/B Kæmpefryd.

connection is used in full. User Load Balancing means that the common bandwidth always is allocated evenly amongst the active users in the housing association, i.e. the users which are using bandwidth at the given time:

- In periods of time with many users on the internet, typically morning and evening. The users have the bandwidth available, that the common connection is dimensioned after.

- In periods of time with few users on the internet, typically daytime, nighttime and during holidays, the users have much more bandwidth available.

- In periods of time with high peak traffic, for example at big media events, where the internet usually crashes, the User Load Balancing ensures that all users have access to the internet, because all active users are allocated equal amount of bandwidth. Their bandwidth is naturally a little less than normal.

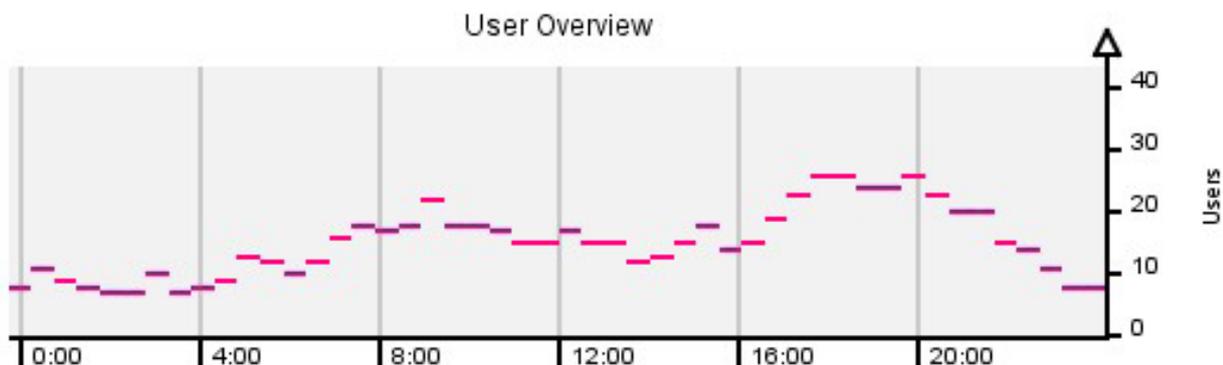- No peer2peer programmes can prevent other users to get their fair share of the bandwidth.

The redundant capacity from those flats that do not use their entire part of bandwidth, are allocated to other active flats, so no bandwidth is wasted. The allocation of the housing associations bandwidth, happens continously (thousands of times per second).

Systemintegrator

EL Design has implemented internet solutions for housing associations and businesses since 1997. "We try to standardize on the SmartShare solutions that with our costumers, is used daily by more than 1400 residents. Those of our costumers who have the SmartShare products installed, all experience a very fast internet with great stableness – and less work for the IT responsibles." states Martin Lohse.

www.eldesign.dk

Number of simultaneous users over time in a housing association containing 100 flats.

User Overview

Dimensions according to simultaneous users
The graph above shows the number of active flats in a 24 hour timespan on an ordinary day in a smalhousing association. You can see how the number of active users vary through the day and night. With a connection dimensioned to give the users the desirable amount of bandwidth in the evening, the User Load Balancing will provide the users with twice the amount of bandwidth during the daytime, and three times the amount during nighttime