Remote collaboration with Revit

While technology makes it easier for people to work together, people are spreading further and further apart. Employees are dispersed between multiple offices, work from home or on the road, and sit in different cities and different countries. For example, CASE has 40 people working from nine cities in North America, South America, and Europe; HP has approximately 300,000 people working from more than 170 countries.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

TYPES OF COLLABORATION

There are two primary ways to use Revit remotely. The first is to use virtualization. In essence, you use your computer to virtually control a computer already inside the local network—a bit like using a remote control to work on a local network. You can take advantage of the speed of your local network when you synchronize with the central model and the local computer manages the underlying details. The second way is to send Revit files across a wide area network (WAN).

The advantage of virtualization is that you can interact with others on the network as if they were all local to one another. The advantage of WAN collaboration is that it works with most existing IT infrastructures. We’ll do a deep dive of virtualization strategies for segregating the model. In general, related elements should be grouped on the same worksheet. The grouping should follow how the team works. So if one person is responsible for casework, put all the casework on a worksheet together. But if the fit-out is being done floor by floor, divide the casework between the appropriate fit-out worksets. Be careful about over-segregating the model since having too many worksheets (and poorly named worksheets) makes it hard to ensure people are contributing to the correct workset.

To avoid synchronization conflicts, the model needs to be segregated in such a way that users can checkout the elements they need without blocking others from doing so. There are a range of strategies for segregating the model. In general, related elements should be grouped on the same worksheet. The grouping should follow how the team works. So if one person is responsible for casework, put all the casework on a worksheet together. But if the fit-out is being done floor by floor, divide the casework between the appropriate fit-out worksets. Be careful about over-segregating the model since having too many worksheets (and poorly named worksheets) makes it hard to ensure people are contributing to the correct workset.

On large projects it may be necessary to use multiple models. To avoid coordination issues, the models should not be dependent upon one another. Ideally each model would encapsulate an isolated aspect of the project. For example, a multi-tower development might place separate buildings in their own independent models. Whatever the segregation strategy, it is important that the project team understands the model structure. This is especially pertinent if those working remotely have come from outside your organization, and are therefore, unfamiliar with your working methods. These project standards should be agreed upon at project kickoff and then documented in the BIM execution plan.

NETWORK CONFIGURATIONS

There are a number of ways users can set up a WAN connection. The easiest is through a VPN connection. Once users establish a VPN connection to the network hosting the central server, they can access the central file, which can be done in the dialogue box that opens when you synchronize with the central model.

To avoid synchronization conflicts, the model needs to be segregated in such a way that users can checkout the elements they need without blocking others from doing so. There are a range of strategies for segregating the model. In general, related elements should be grouped on the same worksheet. The grouping should follow how the team works. So if one person is responsible for casework, put all the casework on a worksheet together. But if the fit-out is being done floor by floor, divide the casework between the appropriate fit-out worksets. Be careful about over-segregating the model since having too many worksheets (and poorly named worksheets) makes it hard to ensure people are contributing to the correct workset.

On large projects it may be necessary to use multiple models. To avoid coordination issues, the models should not be dependent upon one another. Ideally each model would encapsulate an isolated aspect of the project. For example, a multi-tower development might place separate buildings in their own independent models. Whatever the segregation strategy, it is important that the project team understands the model structure. This is especially pertinent if those working remotely have come from outside your organization, and are therefore, unfamiliar with your working methods. These project standards should be agreed upon at project kickoff and then documented in the BIM execution plan.

There are a number of ways users can set up a WAN connection. The easiest is through a VPN connection. Once users establish a VPN connection to the network hosting the central server, they can access the central file, which can be done in the dialogue box that opens when you synchronize with the central model.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.

Remote collaboration with Revit remains a major pain point. The problem is far from solved, but there are a number of ways to approach it without getting on a plane. In this article we discuss some of these approaches.