

# “Is this mic on?”

The art of arranging rooms, information and technical means to  
maximize plenaries efficiency

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## Preface

If you have been to an ESN event, you have been to an ESN event where there were technical problems.

Depending on the venue, availability of materials, and skill of the relevant OC and CT members, the problems could have ranged from the almost imperceptible annoyance to the disastrous, plenary-interrupting catastrophe, but I can guarantee that no matter how otherwise smooth and well organized the event was, something, at some point, went wrong.

As CNR secretary, occasional technical chair, and overall tech guy at a variety of meetings and events, I have had my fair share of disasters, some of which I handled better than others. But three years, more than fifteen international events and countless local ones, and many, many error messages later, I feel like I have reached a fairly good understanding of what makes an event work. What makes an event's **plenaries** work, in particular.

This is what I will try to explain in simple, not-too-technical terms in this document, targeted towards anyone who ever intends to host an event in their section.

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## The plenary room

During most events, participants will spend around 25 to 30 hours in this room, so it's important to pick it carefully.

Like everything else in this document, the plenary room should serve the event, not the other way around. In other words: resist the temptation to pick the biggest, fanciest, most impressive room at your disposal. For smaller meetings, a simple classroom can be good enough. Not only will you save costs, but even if you could get it for free, rooms are usually better used at or near their capacity; acoustics are designed for that. Conversely, be careful not to pick too small a room!

Make sure that every participant can hear and see the action equally well from each part of the room: there should be a slope leading toward the scene, for instance.

Temperature and ventilation are crucial. Inappropriate temperatures will distract participants, while improper ventilation will slowly tire them out. Remember that a large group will rapidly heat up an enclosed space, so if you're in a warm locale, make sure that the AC is strong enough to counteract this.

Make sure you have keys to the room and are able to lock it during lunch and overnight. That way you won't have to remove equipment and set it up again the day after, and the participants will be able to leave their personal effects in the room over lunch, saving time.

One final thing: if at all possible, don't change plenaries room during the event. If you have a great room which isn't available on Friday, it's not a great room. Changing rooms implies moving all the equipment and forcing the CT to discover all the local quirks during the event.

## What does the CT need?

The chairing team needs to have total control over the organization of the event at any time. This means being able to access and edit the agenda and the presentations, and keeping track of the speakers.

The chairing team will usually be positioned in front, so as to be able to see the participants. Make sure they have enough power plugs nearby for their computers.

To address the audience, and given that the CT usually doesn't move much, a fixed or wired microphone can be used. Usually only one microphone is necessary, but spares can be useful.

While the usefulness of providing internet to the participants can be debated, letting the CT access the internet is absolutely necessary. Ideally, the chairing team should have access to wired connections, separate from the participants' network. The streaming computer in particular will require a sizeable bandwidth to upload its video feed.

## What do the speakers need?

Speakers should have full freedom to demonstrate whatever it is they're demonstrating. This means they should have enough space to move around and address their audience. It also means they shouldn't be bound to the presentation computer: a wireless clicker (ideally with an embedded laser pointer) is a must. Finally, a wireless microphone is the most comfortable option. Wired microphones can be unwieldy, and since we have a lot of speakers, lapel microphones would have to be attached and detached constantly.

They should see their presentations, and ideally, see the next slide and their comments. This can be easily achieved on PowerPoint by showing the presentation in "presenter mode". I will introduce the presenter mode later on.

Meetings are usually time-sensitive, yet speakers can get absorbed in their material and lose track of time, so a clock display in front of the stage can be useful. I like to use [e.ggtimer.com](http://e.ggtimer.com), which can be set with an URL like <http://e.ggtimer.com/5minutes> to create a big, visible countdown. It can even emit an alarm at the end!

## What do the participants need?

Obviously, the participants need to be able to **see** and **hear** the speaker and chairing team.

### Seeing

- Make sure that the screen is visible from every point of the room
- Make sure that the sun won't cover the screen. Keep in mind that if you're planning your event months in advance, the sun's position/day length might not be the same when the event occurs.
- On any presentation you have control over, remember to use large fonts that can be read from the back of the room.
- For very large events/venues, consider using repeater projectors/screens showing the stage in the back half of the room.
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### Hearing

- Take time to balance the microphones' sound and make sure everybody can be heard on the same level
- Check that the speakers are audible from every corner of the room
- When a microphone is too close to a speaker, feedback occurs (this annoying, self-amplifying high pitched noise). Make sure this situation can't occur.

Not only should the participants be able to hear, they should be able to speak back, during question rounds for instance. You will need at least one, and ideally two wireless microphones. Have one or two volunteers on standby to move the microphones around the room. When there are several queued speakers, have the spare microphone delivered to the next speaker so as to avoid waiting between the questions.

The audience also likes to know what's coming up next: consider displaying the agenda on an auxiliary projector on the side of the room. This can also be used to display any kind of practical information: OC announcements, social program updates, transport information at the end of the event, etc.

The agenda is usually a fairly big document written in small letters. When you're projecting it, you can zoom in on the relevant part of the agenda (time, title, speaker and room), discarding any borders, description, etc.

During coffee breaks and other pauses, you can show a countdown to the start of the next session. I like to use <http://itsalmo.st/> for that.

## Audience access to internet

Participants might need to access the internet during the event for all sort of reasons: communicating with their sections/members, fetching information, writing reports online, etc.

Yet, Wi-Fi networks tend to get rapidly overloaded when a hundred people try to use them at the same time. Universities and conference rooms might or might not have the equipment required to handle the huge load. If you have access to routers yourself, try to set up different networks spread through the room. If you're having bandwidth trouble, tell the participants to avoid heavy internet usage (YouTube, etc).

Make sure that the participants know the network's SSID (name) and password. Display it on a screen, write on a board, or print leaflets and put them on the tables or welcome package.

The participants will usually want to have access to a power plug. Try to spread power bricks in between the seats, connected to different plugs around the room.

The participants will be interested in the meeting's presentations. Make sure to upload them as soon as possible. If it's an international meeting, they should be made available on the wiki. Otherwise, put them in a Google Drive or Dropbox folder and share the link with the participants once the event is over.

## Fulfilling those needs: what do we need?

A good event doesn't need to be expensive. Most universities and conference rooms already have everything you need: it's just a matter of bringing it together. You will typically need:

### Audio

- **Speakers**, enough to be heard throughout the room. In a medium sized-meeting (~100 people), two in the front should be enough.
- **Microphones**. You will need one for the speaker, at least one for the chairs, and at least two for the audience. Except for the CT, all of them should be wireless.
- A **mixing table** to connect all this stuff together.
- **Cables**. In particular, make sure to have a cable that can connect the computer to the sound system (so jack on one end, and whatever the table accepts on the other end: jack or RCA, usually)



3.5mm jack cables



RCA (composite) cables

### Video

- At least one, ideally two **projectors**. HD projectors are better, but not mandatory.
- Projection **screens**. Most rooms have a fixed one, but you'll need extra for the other projectors.
- It can be useful to have one or two extra **monitors**.

In addition, you will need a good number of extension cords and power bricks to power these devices. Try to avoid having cable where people walk: if it's unavoidable, use tape to fasten the cables to the grounds and reduce the risk of people tripping on them.

## Linking everything together

Almost every computer has two video outputs. For a laptop, the first one is of course its main screen, and the second is provided through its VGA or HDMI port. This can be used to control/display more than one thing at a time.



*VGA port and cable*



*HDMI port and cables*

Yet, two screens is still too limited. I recommend at least three:

- The main control screen of the (technical) chair
- The presenter view
- The presentation

And optionally, three more:

- An auxiliary screen for the speaker, showing a timer or their presentation
- An agenda display
- A streaming view

With two screen per computer, that brings us to two or three computers, each supporting two of the function, with the help of additional screens and projectors. I like to have the following set up:

- The **CT computer**, connected to an auxiliary projector, with the control view and the agenda on the projector
- The **presentation computer**, connected to the main projector, with the presenter view on its screen and the presentation on the projector

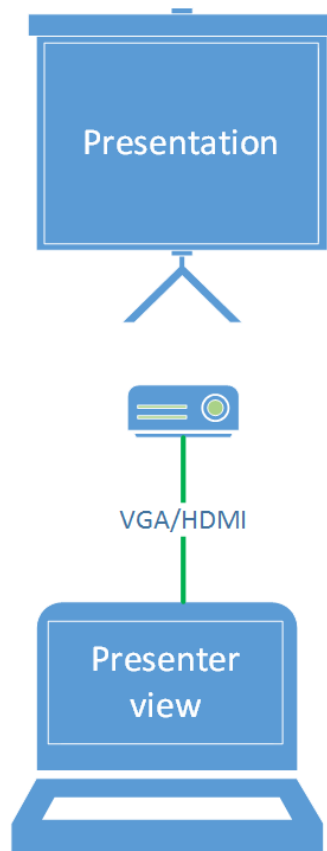


- The **auxiliary computer**, displaying the stream software on one screen and with an additional screen facing the speaker and displaying the timer, etc. Note that if no additional screen is available, you can simply display the timer on the laptop screen and have the stream software running on the background.

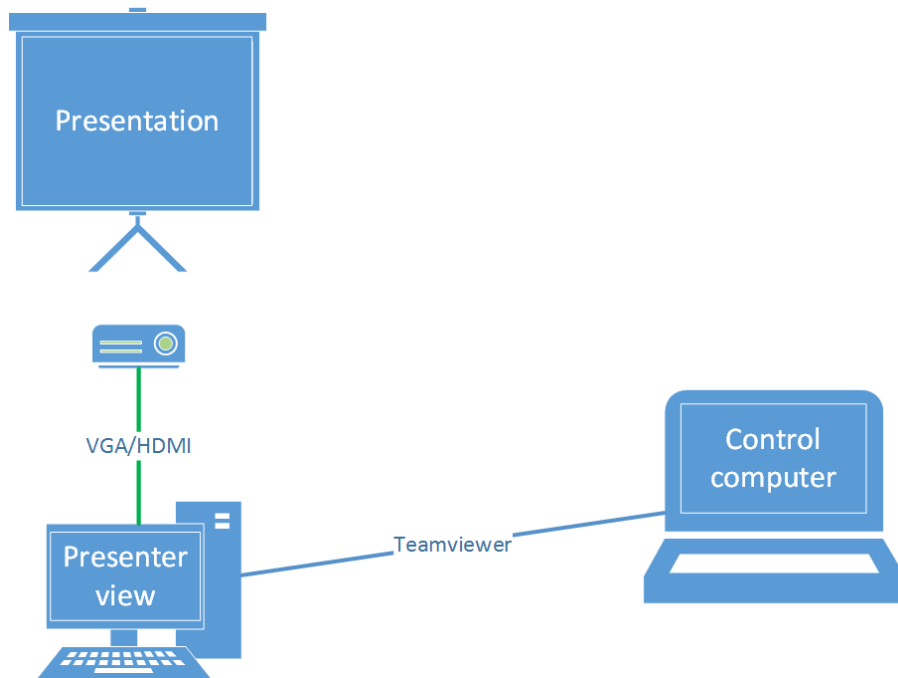
Depending on the room layout, you might be able to run the stream from the CT computer too; however, most of the time that computer is facing the crowd, and the streaming camera should face the presenter.

Now, managing three computers normally involves a lot of running around. However, since we live in the future, it is now possible to manage everything from a single computer, thanks to remote control software such as [TeamViewer](#).

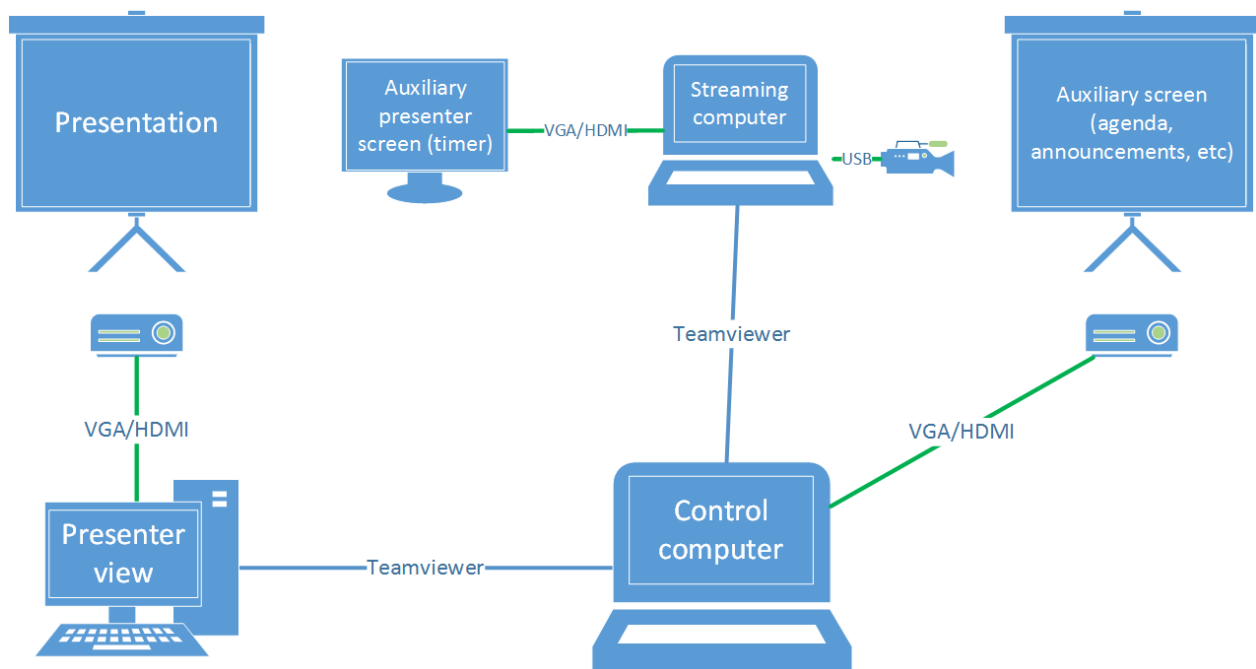
Set up TeamViewer on each of the three computers, and have the control computer connect to the other two. That way, you can now launch presentations and adjust the agenda display, timer and stream from your own seat! Note that additional TeamViewer connections might be necessary for the stream.



*Minimal set up with one computer and a projector*



*More flexible setup with two computers. Classrooms and amphitheatres often feature a podium with a fixed presentation computer: linking it via TeamViewer allows control from the chairing team table.*



*More advanced set up with three computers, two projectors and an extra screen. In lieu of an auxiliary screen, the streaming computer can be connected to the auxiliary projector.*



## Presenting

A complete Office tutorial is outside of the scope of this guide, but a few shortcuts are worth mentioning. Among the ones I use the most for this role are, on windows:

### On Windows:

- **Win+P** switches the multi-screen mode, between only left screen, only right screen, duplicated (both screens show the same thing; useful when you want to see what you're showing) and extended (two independent screens; necessary for the presenter mode)
- **Alt+Tab** switches windows (**Alt+Shift+Tab** cycles them in the other direction)
- **Win+Shift+left / Win+Shift+right** moves the window to another screen

### On Microsoft Office

- **F5** launches the presentation
- **Shift+F5** launches the presentation from the current slide

### On Adobe Reader

- **Ctrl+L** puts the pdf in full screen

### On most browsers:

- **F11** switches the window to full screen
- **Ctrl+Tab** switches the tab (**Ctrl+Shift+Tab** for the other direction)

With those, you can rapidly launch presentations or display windows in full screen on another screen without the need to click or drag things around. It's faster and looks smoother.

## Presenter mode

Presenter mode is enabled by default on PowerPoint 2013 and older when the computer is connected to two displays (i.e. a laptop plugged into a projector), and will show the presenter view (with current slide, next slide and comments view) on the primary monitor and the full screen presentation on the secondary display (usually, the projector). The setting will have to be manually turned on for older versions of PowerPoint.

## PDF or PPT?

PowerPoint (or Libre/OpenOffice Impress) possesses many features like the aforementioned presenter mode, animations and transitions, and of course the ability to edit presentations on the fly. One thing to be careful about is that if the presentation is using special fonts, they will need to be installed on the presentation computer: remind presenters about this.

By contrast, PDF are fully self-contained documents that can be presented as is, albeit with less control.

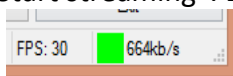
## Live streaming

The live streaming does not require any particularly advanced setup. You will need:

- **A webcam.** Ideally an external webcam connected to the computer via USB, but a laptop integrated webcam will do in a pinch.
- **A microphone.** The webcam or at least the laptop should come with one.
- **An internet connection** with as good a throughput as you can get. I recommend a wired connection here, as Wi-Fi networks tend to get saturated by participants.
- Let your IT support desk know that “**ports TCP 1935 and TCP/UDP 554** will need to be open” for the duration of the event.
- A Galaxy account with a **local or national webmaster role**.

And that’s it for the material requirements. Next, you will need to:

- Go to <http://live.esn.org/> and press “Add content”. Fill the form, and keep a note of the “stream channel” value that was generated (by default: channel20).
- Download and install [OBS](#).
- Start OBS, go to Settings, then to Broadcast settings, and enter the following values:
  - In Server, write `rtmp://streaming.esn.org/ESNStream`
  - In Play Path/Stream key, write down the “stream channel” number you recorded earlier.
- Close the settings menu. Add content to your stream by right-clicking in the “Source” frame, and selecting Add → Video Capture Device. Enter a name and select your webcam in the menu that pops up.
- Try pressing “Start streaming”. Does the square in the bottom right corner becomes

green, like so: ? If yes, your stream is online!

This was the short, quick start version. Setting up a stream is described in greater detail on Helpcenter:

- [Basic Live Streaming](#) covers what we just did, but with more information and screenshots;
- [Advanced Live Streaming](#) covers overlays, displaying presentations, different scenes, audio, etc

## Tangentially related topics

### Nametags

The nametags fulfill two needs of the event: identifying people, and providing information that, unlike the survival guide, is more or less guaranteed to follow the wearer.

#### Identifying people

- Write **the name of the person on BOTH sides**. Nametags have a tendency to flip around and you can't guarantee that one side will always be facing away from the wearer. Write at least the first name on both sides, and the full name and position on one of the side.
- Make sure that the **position** of the person is relevant to the event at hand. For an international event, the participant list on event.esn.org indicates under which role they're attending. You can also find all the person's roles on their galaxy profile.
- Make sure that whichever font you pick can display every **special character and diacritics** that can make up a person's name in various European languages.
- The **ESN country** and the nationality can often differ, particularly in the NEP area. If you're going to write a country, people usually prefer to be identified by their "country of adoption".

#### Providing information

- The reverse of the nametag is a great place to store essential information. Write down **important phone numbers** (OC, local taxis, etc) and **addresses** there.
- A **map** of the premises can also be useful.
- You can also insert a **simplified schedule**. Keep in mind that times are liable to move around during the event.

### Survival guide

The survival guide is a great way to introduce people to your event. However, speed is the essence here: too many survival guides are published only days before the event starts, where their usefulness is very limited. Depending on their travel plans, people can start their journey long before the official start date. Publishing the survival guide one week prior is a bare minimum; try to get it out as soon as possible.

Information that will be appreciated includes:

- **What should you bring?** If there is a gala dinner or other formal event, people will need a suit. If you're going to a pool or similar, they will need a swimming suit. Ditto for themed events. Think of anything your participants will need.
- Describe what the **weather** should look like when the event occurs. What's the monthly temperature average? How likely is it to rain/snow?
- Describe the **places** you will go to and **events** you will have.
- Give a **detailed schedule** of what will happen, when, and where. But keep in mind again that those times can change during the event.
- Give an overview of **local transportation**, especially from and to the airport and/or train station. Try to include timetables (in English) of daytime and nighttime public transit, maps, and fare information.
- **Practical information.** Currency (and its approximate value in euros), voltage, plug type, local time zone, etc. You can also mention local laws regarding, for instance, public drinking.
- **Useful numbers.** One member of the OC should be joinable at all time. You can also write the number of taxi companies and of the hotel. Remind people about 112. If 112 isn't in service in country, take extra care of mentioning the local emergency numbers.
- **Maps of the area**, showing the location of the different venues. You can combine it with the transportation map and show the different bus/tram/metro lines between the areas.
- At the end, a **glossary** of various common expressions in the local language can be useful, especially if locals aren't that familiar with English. Make sure to write the equivalent pronunciation in English! You can also indicate the English pronunciation of the alphabet, to give people a shot at pronouncing local names.
- Give the average **price of various local wares** (snacks, kebab, drinks, etc). If you're not familiar with the prices in that particular city, check a website like [Numbeo](#) or [Expatistan](#). Provide the equivalent in euros.