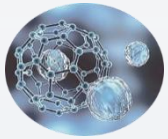
English Practice

西安交通大學
XI'AN JIAOTONG UNIVERSITY

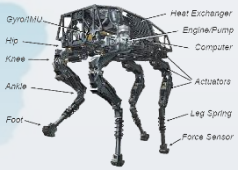
conference



Writing

How to speak English professionaly?

Presentation



Networking

General Guidelines for PPT and Presentation

Outline

- Brief Introduction of PPT and Presentation
- General guidelines for PPT
- General guidelines for Presentation

Outline

- **Brief Introduction of PPT and Presentation**
- **General guidelines for PPT**
- **General guidelines for Presentation**

Presentation & PPT

About technical presentations:

- **Similar yet different scenarios:**
  - Presentation of your research results in a conference
  - Technical talk when a scholar visit other institution
  - Working report to your boss
  - Thesis defense in front of your degree/graduation committee
- **What will audiences see and hear?**
  - See: your power-point file and your performing act
  - Hear: your voice and sentences
- **What goal do you want achieve?**
  - Let audiences know the large picture of your work
  - Let audiences know your idea and its rationale
  - Let audiences know the value of your work

Presentation & PPT

PPT's functions:

- **Provide Information**
  - Key information
  - Additional information not mentioned in the talk
- **Lead audiences' thought**
  - Build a chain-of-thought step by step with the help of PPT
  - Do not let their minds steer off your lead
- **Maintain audiences' attention**
  - Stimulate with color, figure, animation, etc., as a compensation to your voice
- **To support the message being delivered**
  - Charts, tables, and figures triumph plain texts (on PPT) and words (from your mouth)

Outline

- Brief Revisit of PPT and Presentation
- General guidelines for PPT
- General guidelines for Presentaation

Tips to be discussed

- Texts
- Bullets
- Font
- Colors
- Tansitions and animations
- Chart, tables, and figures.
- Pictures

Text: Principles

- **General principle**
  - Do NOT put too much text on the slides
- **Style**
  - Try not to write the full sentence
  - Use phase and words instead
  - Keep the core information for audiences
- **Gramma**
  - Sometime you can bend the rules
  - Abbreviations and signs can be used

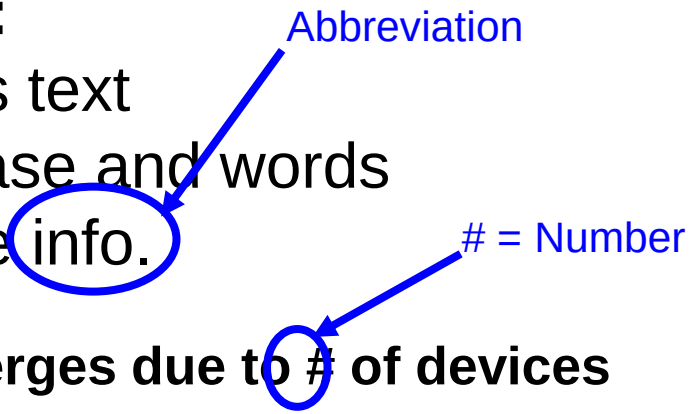
Text: Examples

Worse:

- Too much text
- Full sentences
- Information overflow

Internet of Things (IoT) has been emerging for the mobile devices and sensors growing explosively. However, the cloud computing can't provide real time services. Therefore, edge computing is proposed as a new paradigm for reducing latency, placing small data center at the edge of the Internet, more close to the end devices. Edge computing has the advantage of less latency, which decreases the demand on processing/storage capabilities, battery life, network bandwidth for the end devices in the IoT.

Better:



- Less text
- Phrase and words
- Core info.

IoT emerges due to # of devices and sensors growing.

Cloud computing is not realtime.

A new paradigm: Edge computing

Edge computings' advantage: low latency

Bullets: Principles

- **Multi-level bullet system:**
  - **Information**
    - Higher level: More important information
    - Lower level: More detailed information
  - **Size**
    - Higher level: Larger marker, larger font
    - Lower level: Smaller marker, smaller font
  - **Color**
    - Bullets' color is typically different from text
    - Different levels share the same color for bullets
  - How many levels?
    - No more than 3 (not strictly)

Bullets: Examples

Worse:

- No multi-level
- Color is the same to text

- **IoT emerges due to # of devices and sensors growing.**
- **Cloud computing is not realtime.**
- **A new paradigm: Edge computing**
- **Edge computings' advantage: low latency**

Better:

- Multi-level
- Different colors

- **IoT emerges due to # of devices and sensors growing.**
- **IoT requires realtime services**
  - Cloud computing is not realtime
  - Edge computing offers low latency
- **Edge computing serves as a new paradigm for IoT**

Font: Principles and Examples

- **Font type:**
  - Arial is recommended, Be careful about Times New Roman (letters sometime seem unclear, especially with a poor/old projector);
  - **Bold**, *Italic*, underline, and shade can be used either separately or together for highlight.
- **Font size**
  - For Arial: Font size ≥ 20 (The minimum: 18)
  - The Larger, the better, as long as necessary info can be well fit in one-page slide.
- **Font color**
  - Different colors can be used for separation and emphases.

Color: Principles

- **Background color vs. Text color**
  - Highly-contrastive colors: Black vs. White; Yellow vs. Black, etc.
  - For technique presentations, white background is always the first priority (Please trust me).
- **Number of text colors in one slide**
  - No more than 3; maximum 4.
  - Pictures and photos do not need follow this rule.
- **Colors for texts/line on white background**
  - **Black, Red, Blue, and Dark Green**
- **Colors for background of textboxes**
  - Light colors

Color: Examples (I)

Good Choices!
It is very clear!
Only problem: it seems a bit too dark.

I can barely read it!

It is a disaster

Good choices!
It is very clear!

The color is too light and I cannot read it.
Please do not hurt my eyes!

Trust me!
This is Best!
I love white background!
Very clear!

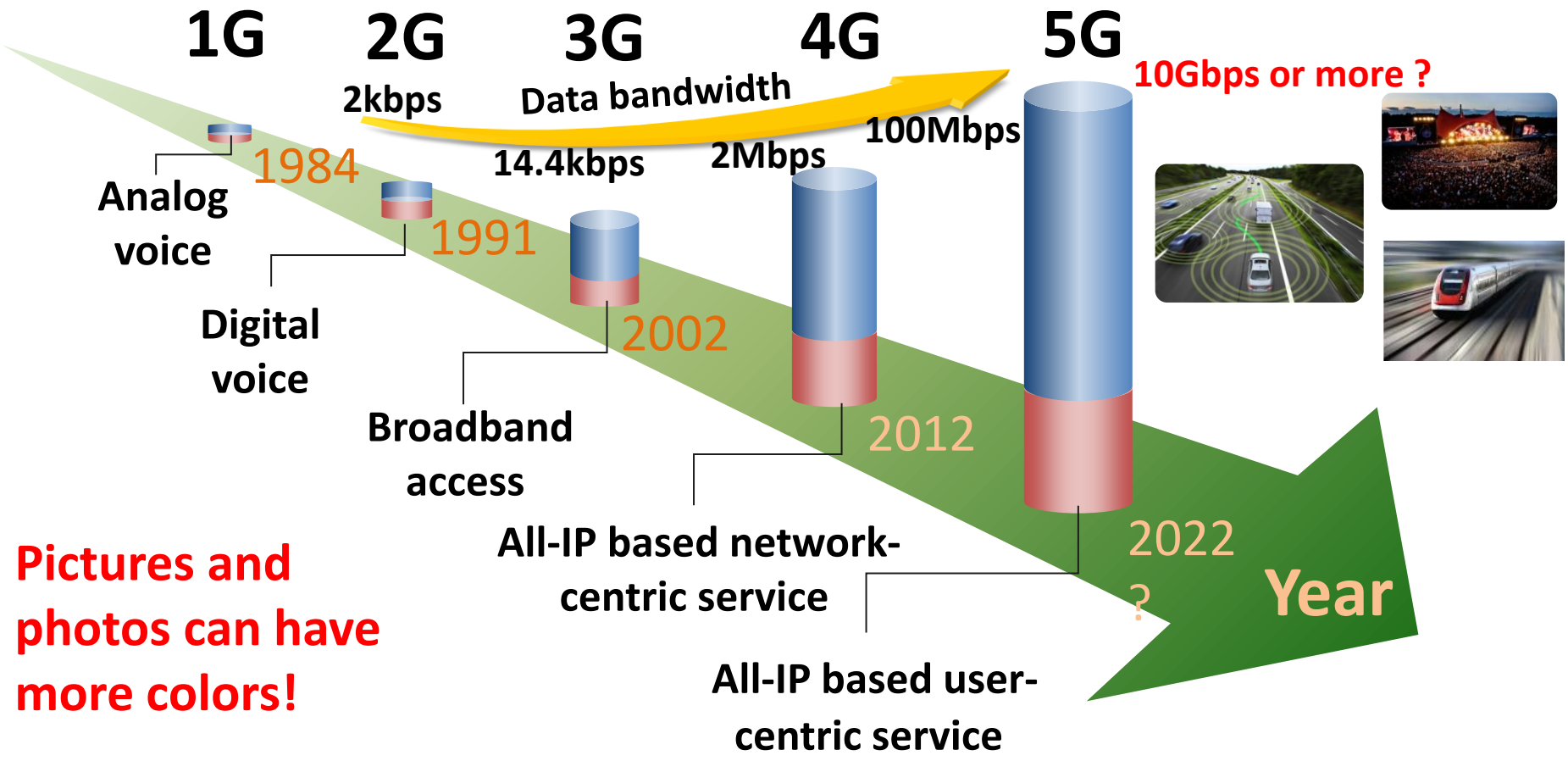
Color: Examples (II)

Network Model

- **Local servers:**
  - ✓ each local server covers one factory or one warehouse of an industrial park/site, and is equipped with wireless connection capability;
- **Local sensor nodes:**
  - ✓ monitoring industrial enviornments, which are equipped with certain capability of computing, caching, and communications.
- **Cellular base station:**
  - ✓ Coverage over the entire industrial park/site.

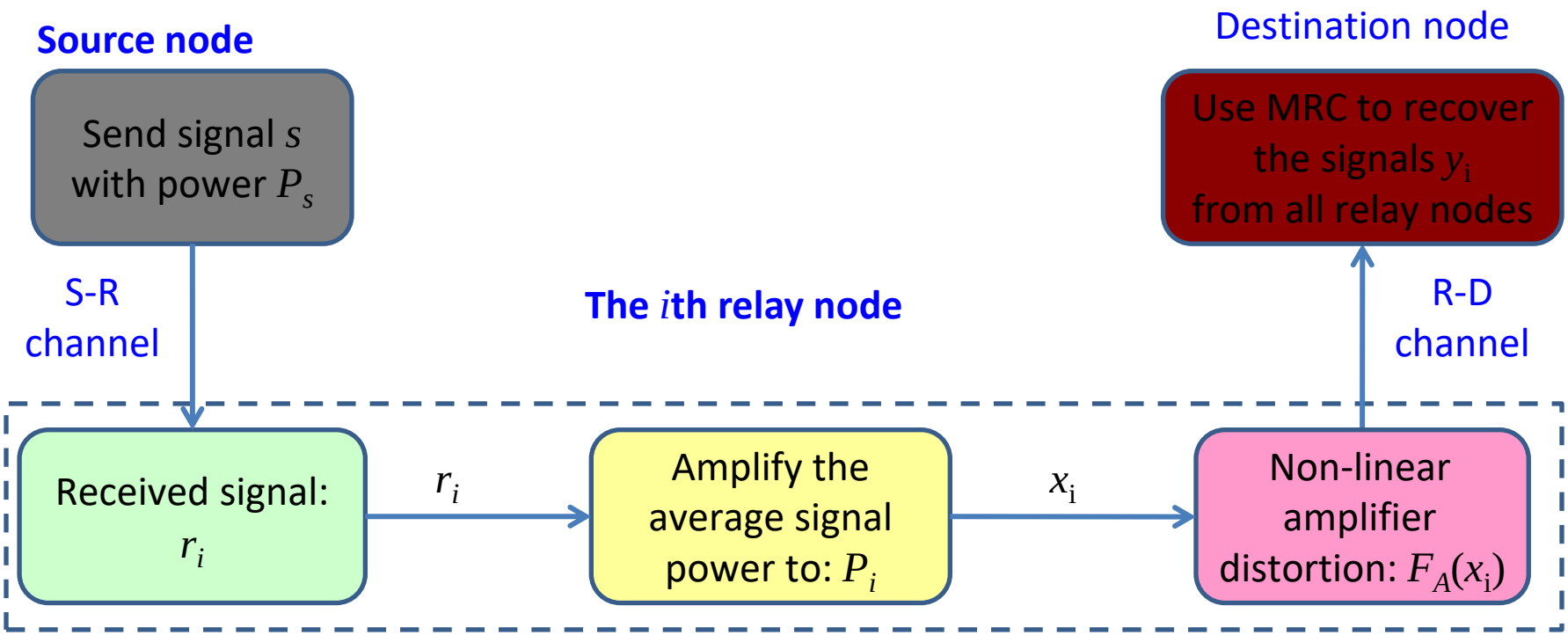
A bad color mix which gives audiences an impression of mess!

Color: Examples (III)



Pictures and photos can have more colors!

Color: Examples (IV)



Background colors for text box had better be light colors!

Transition & Animation: Principles

- **Slide transitions (Not necessary)**
  - Cost time
  - Not recommended in general
- **Animation (Very necessary)**
  - Pros:
    - Appear in order such that we can lead audiences' thought
    - Better show logic and processing flows
  - Cons:
    - Cost time (default for animation transition is 0.5, and it is too long!! Try to make it minimum).
    - You need a lot of time to prepare it!

Animation: Examples (I)

Lead audiences' thought!

Explosively increasing of energy consumptions by *mobile* networking devices

Mobile devices

Waste battery

Severe environment pollutions

Vehicular wireless networks

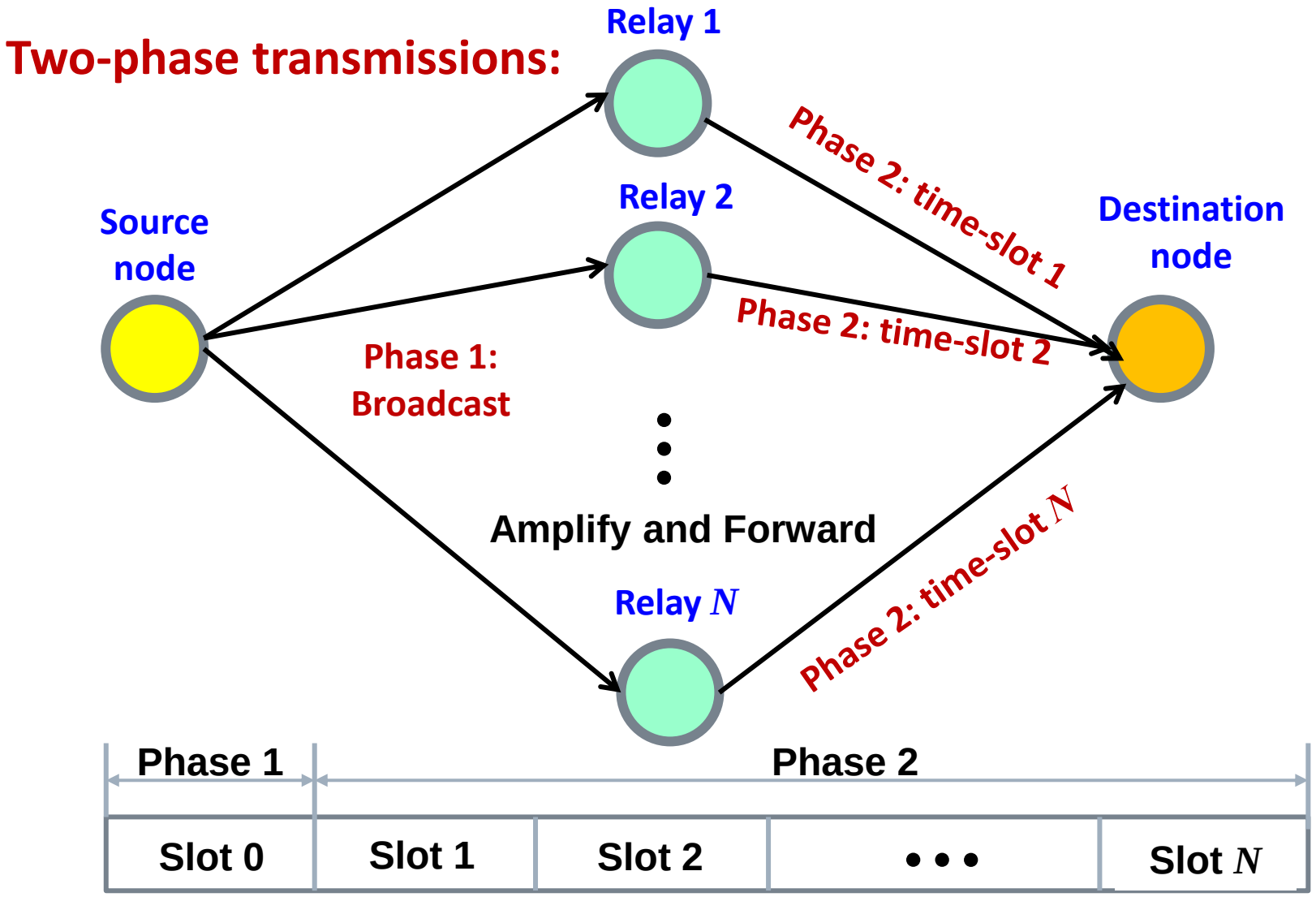
Need to burn more gas to get electricity power

More carbon dioxide emissions

Expedite consumption of fossil fuel

Animation: Examples (II)

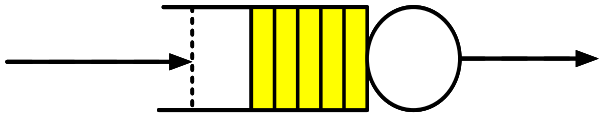
Better show the flow!



Animation: Examples (III)

Need a lot of time to make one!

Arrival process $A[t]$



Departure process $C[t]$

Constant departure $\mathcal{A}(\theta)$

Constant arrival $\mathcal{C}(\theta)$

Effective bandwidth

Effective capacity

The *minimum* required rate under the QoS exponent θ.

The *maximum* supportable rate under the QoS exponent θ.

Given $A[t]$ and $C[t]$,

if $-\lim_{Q_{\text{th}}\to\infty} \frac{\log\left(\Pr\{Q > Q_{\text{th}}\}\right)}{Q_{\text{th}}} = \theta^*$,

we must have $\mathcal{A}(\theta^*) = \mathcal{C}(\theta^*)$.

$$\mathcal{A}(\theta) = \frac{1}{\theta}\log\left(\mathbb{E}\left\{e^{\theta A}\right\}\right)$$

$$\mathcal{C}(\theta) = -\frac{1}{\theta}\log\left(\mathbb{E}\left\{e^{-\theta C}\right\}\right)$$

Animation: Examples (IV)

A bad case!

- When text appears, we don't want the audience to be watching the animation for too long and be bored.

- Use the simple

  "Appear effect"

  Not

  "FANCY EFFECTS"

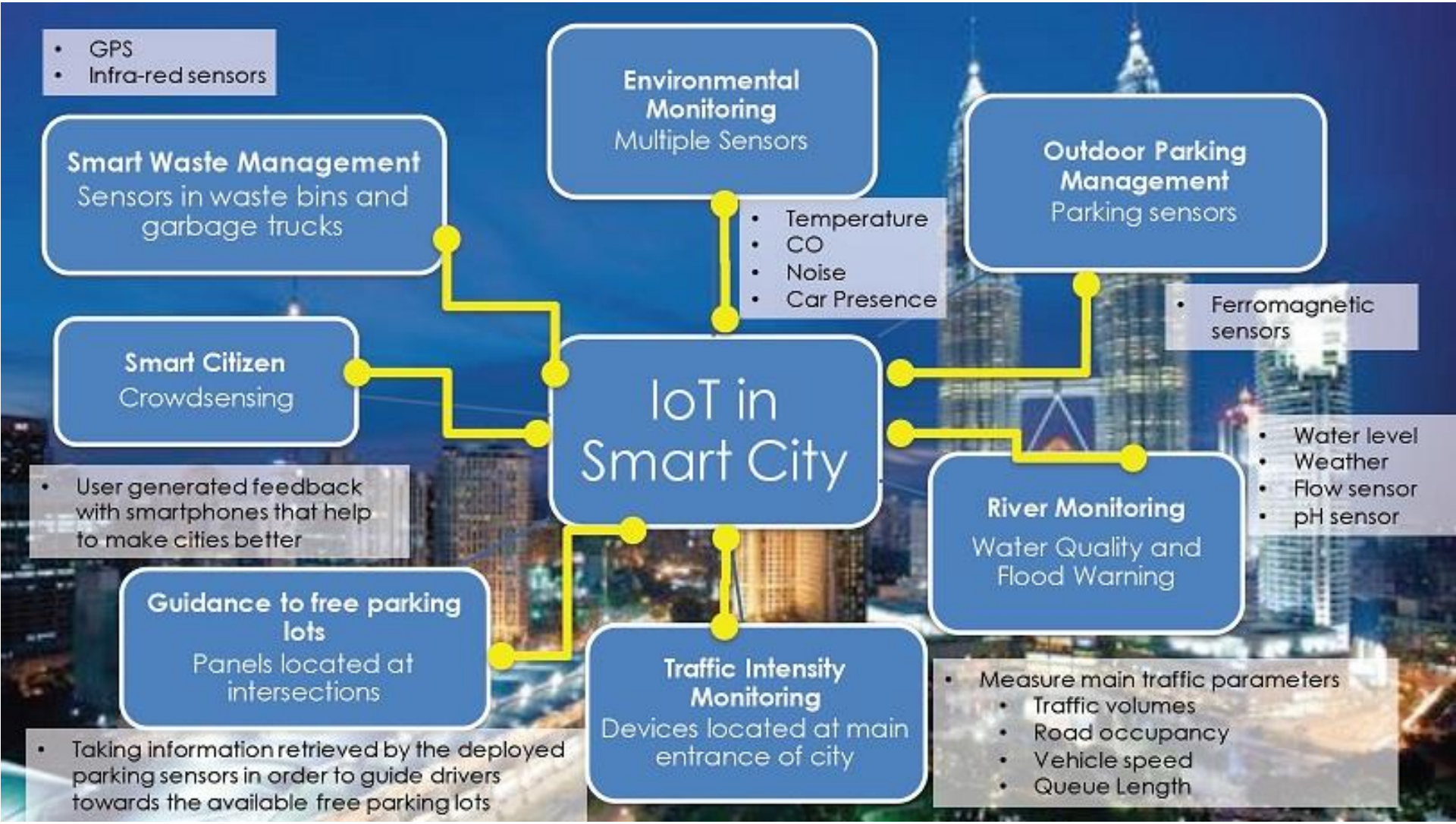
Charts, tables, & figures: Principles

- **General Principles:**
  - **Use charts, tables, & figures more often to replace too much text**
- **The rest all about drawing attention!**
  - **Do not include too much information**
  - **Emphasize key elements that you want to emphasize:**
    - **Use animation for graph or table elements**
    - **Use drawing tools**
    - **Use highly-contrastive colors for different curves**
    - **Use callout box**

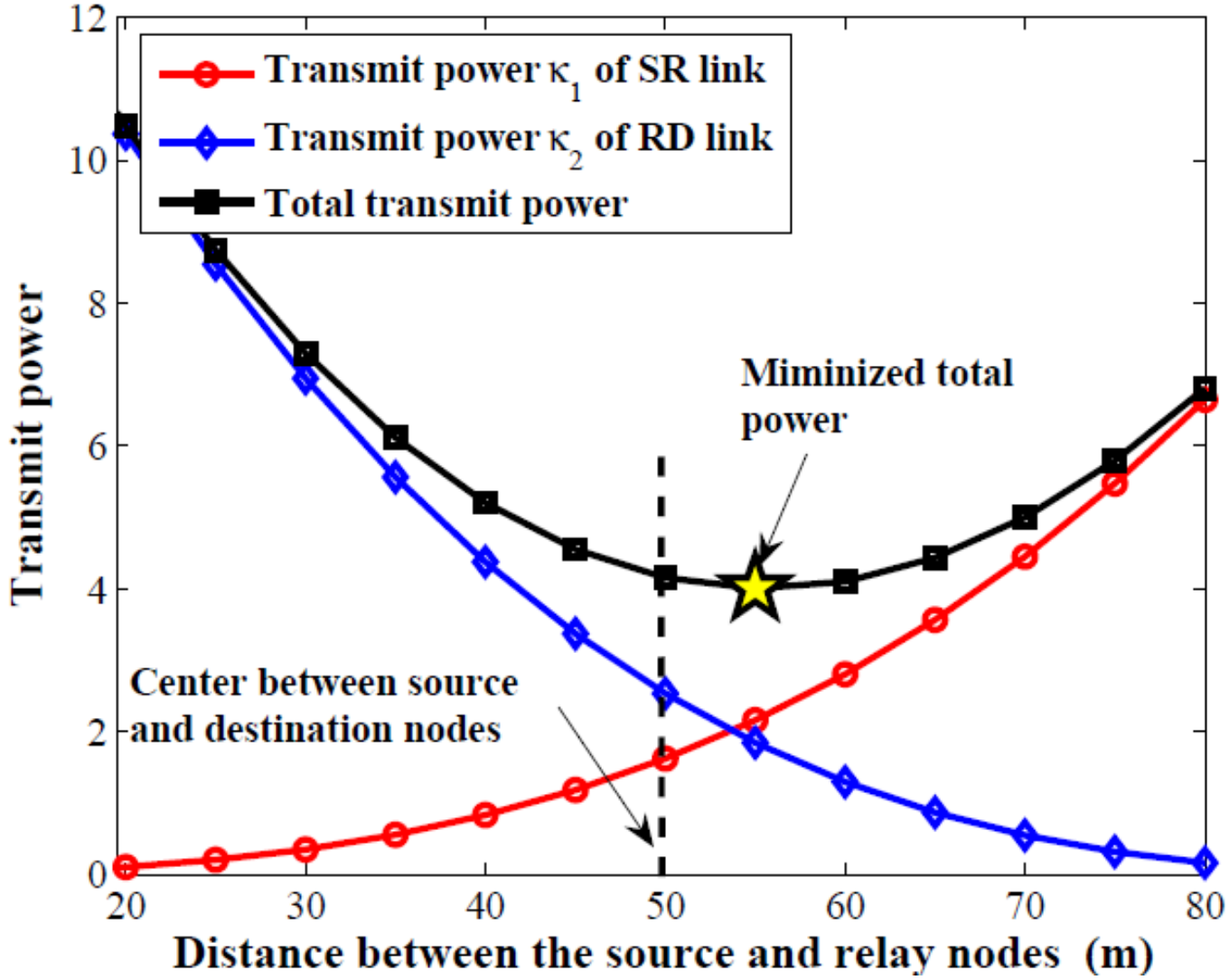
Example: Well summarized table

技术指标	LoRa	Sigfox	WAV IoT	Cellular (GSM;LTE）	Neul	Nwave	Weightless-P	Weightless-N
覆盖范围 (m)	86k	50k	>50k	35k;200k	<10k	<10k	2k	5k
频率 (Hz)	Sub-G	868/ 902M	868 /902M	0.9/1.8/ 1.9/2.1G	ISM/ white space	Sub-G	Sub-G	Sub-G
双向传输	是	否	是	是	是	否	是	上行
数据速率 (kbps)	0.3-50	10-1000	50-100	35-170; >3000	10-100	100	<100	30-100
功耗	低	低	低	中等	低	低	低	低
云端升级	是	否	是	是		否	是	否
定位	有	无	有	有		无		无

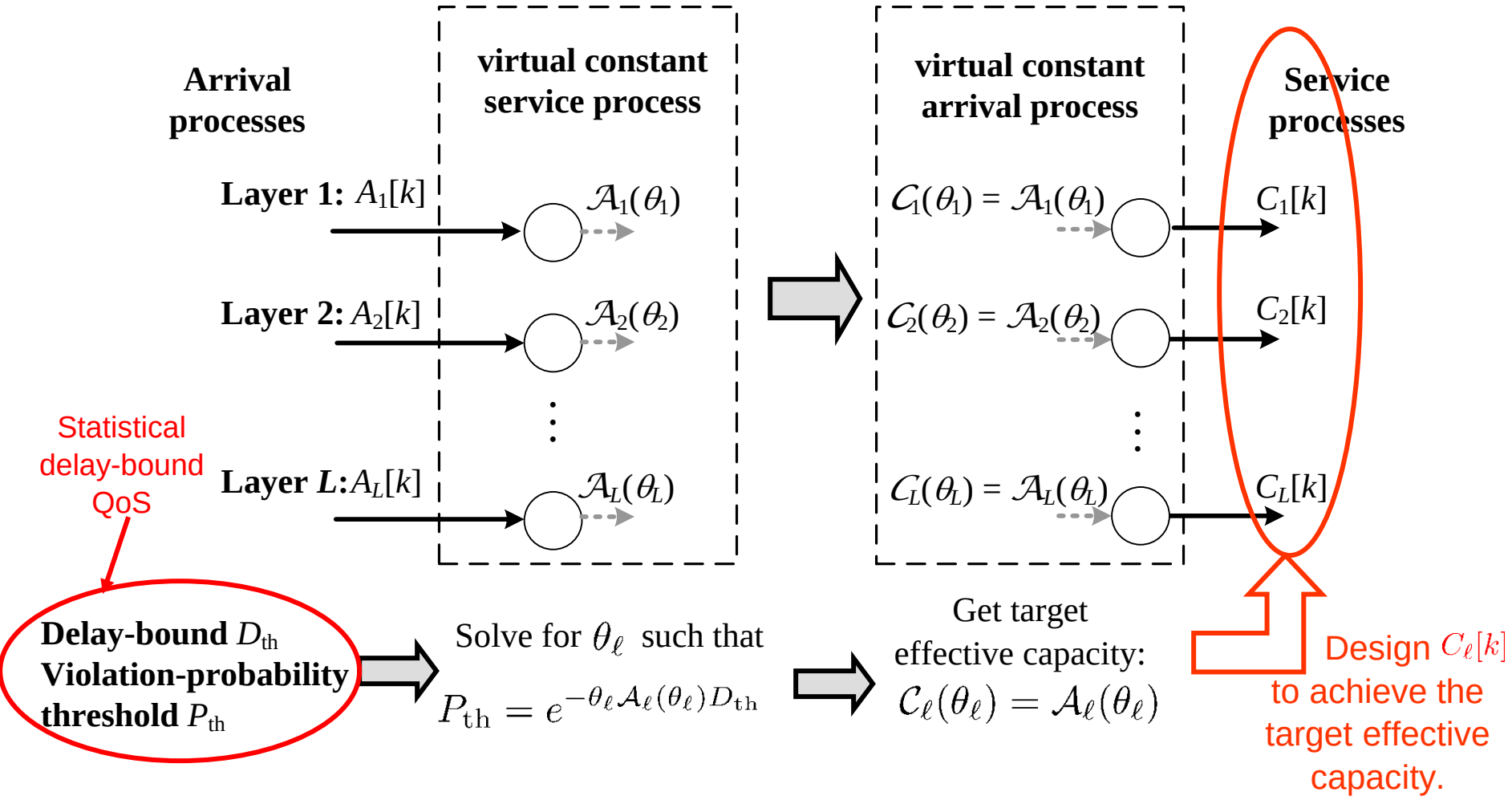
Examples: Too much info



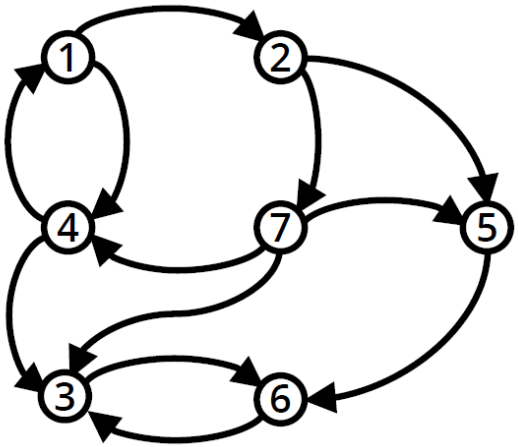
Examples: Different colors

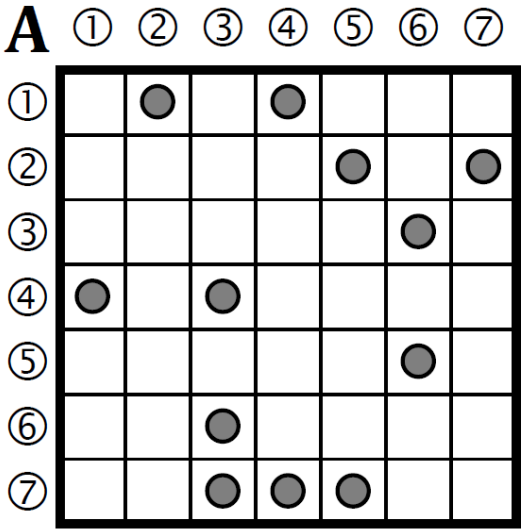


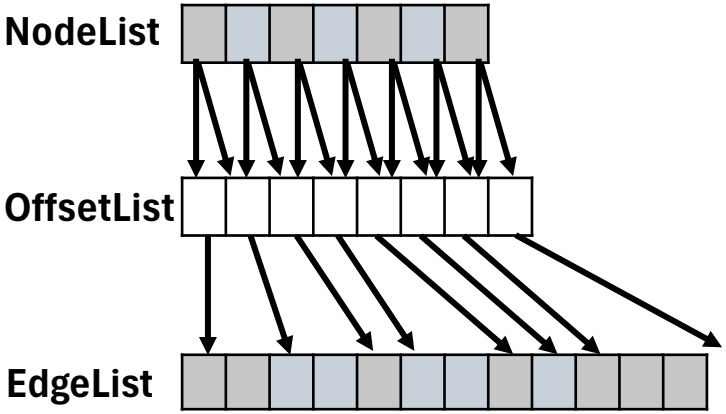
Examples: Use drawing tools



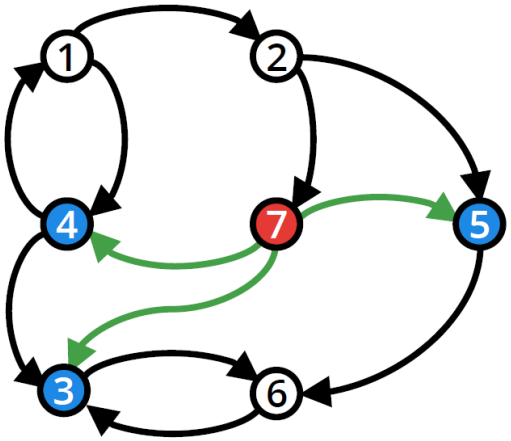
Examples: Animations for emphasis

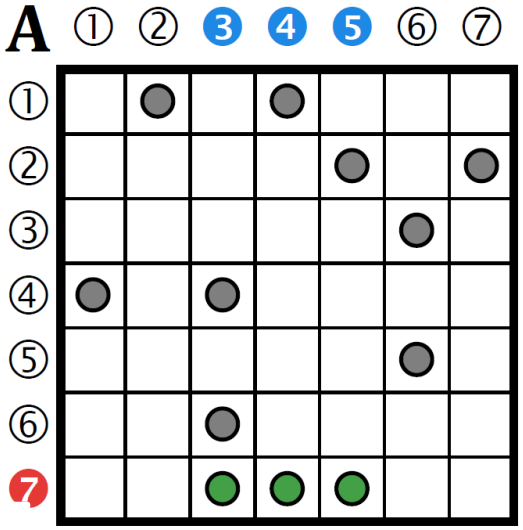


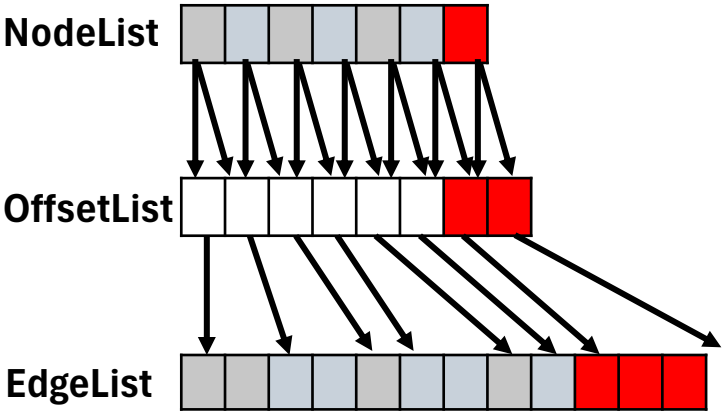




Examples: Animations for emphasis





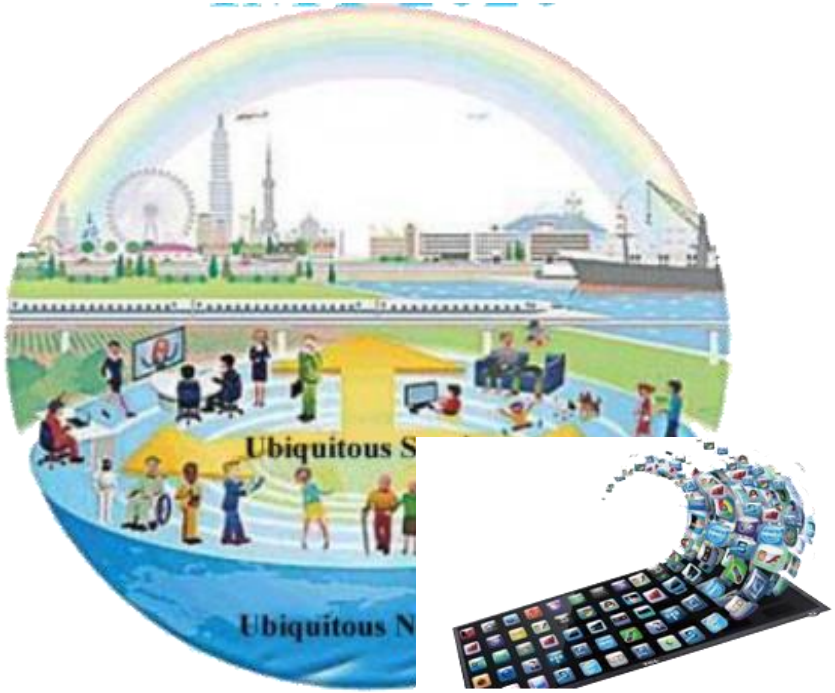


Pictures: Principles

- **General principle**
  - Vision effect:
    - Keep the picture clear
    - Fit it well to the background, do not make it like a patch.
  - Resolution and file size
    - Do not use too high resolution, which is not necessary, making the machine slow
    - Keep the file size small

Examples: Picture vs. Background

Fit Poorly



Fit well

Do not simply make a patch !

Examples: High vs. Low Resolutions

High resolution

Low resolution (1/4 of the left picture)

Can you see the differences?

Outline

- Brief Revisit of PPT and Presentation
- General guidelines for PPT
- General guidelines for Presentation

General guidelines for Presentation

- **General guidelines**
  - **You are talking to people, not ChatGPT!**
  - Loud and clear voice
  - Slow down
  - More interactions
  - Be consistent with your PPT
  - Synchronize your voice with your animation
- **Note:**
  - Compared to PPT, the general guidelines for presentation are more implicit. It will take many of your time to practice towards becoming a successful speaker!
  - More specific discussions on technical presentation would be elaborated on in next session.

General guidelines for Presentation

- **Use short sentences for oral communication**
- **Example sentences:**
  - *** has been regarded as a promising method, which attracts the global-wide research attention. … A focus has been placed on….
    - *** ~~has been regarded as~~ is a well-known promising method, ~~which~~ and it attracts ~~the global-wide~~ wide research attention. … ~~A focus has been placed~~ We focus on….
    - *** is a well-known promising method, and it attracts wide research attention. … We focus on….

General guidelines for Presentation

- **Use simple words for oral communication**
- **Example sentences:**
  - *** has been recognized as a widely open-cited problem
    - *** has been ~~recognized~~ considered as a ~~widely open-cited~~ widely-existing problem
  - In this work, we will report a novel approach to dramatically raise the performance.
    - In this work, we will report a novel approach to ~~dramatically~~ greatly raise the performance.
  - In this work, we develop a xx model to investigate…
    - In this work, we develop a xx model to ~~investigate~~ study …

Thank you !