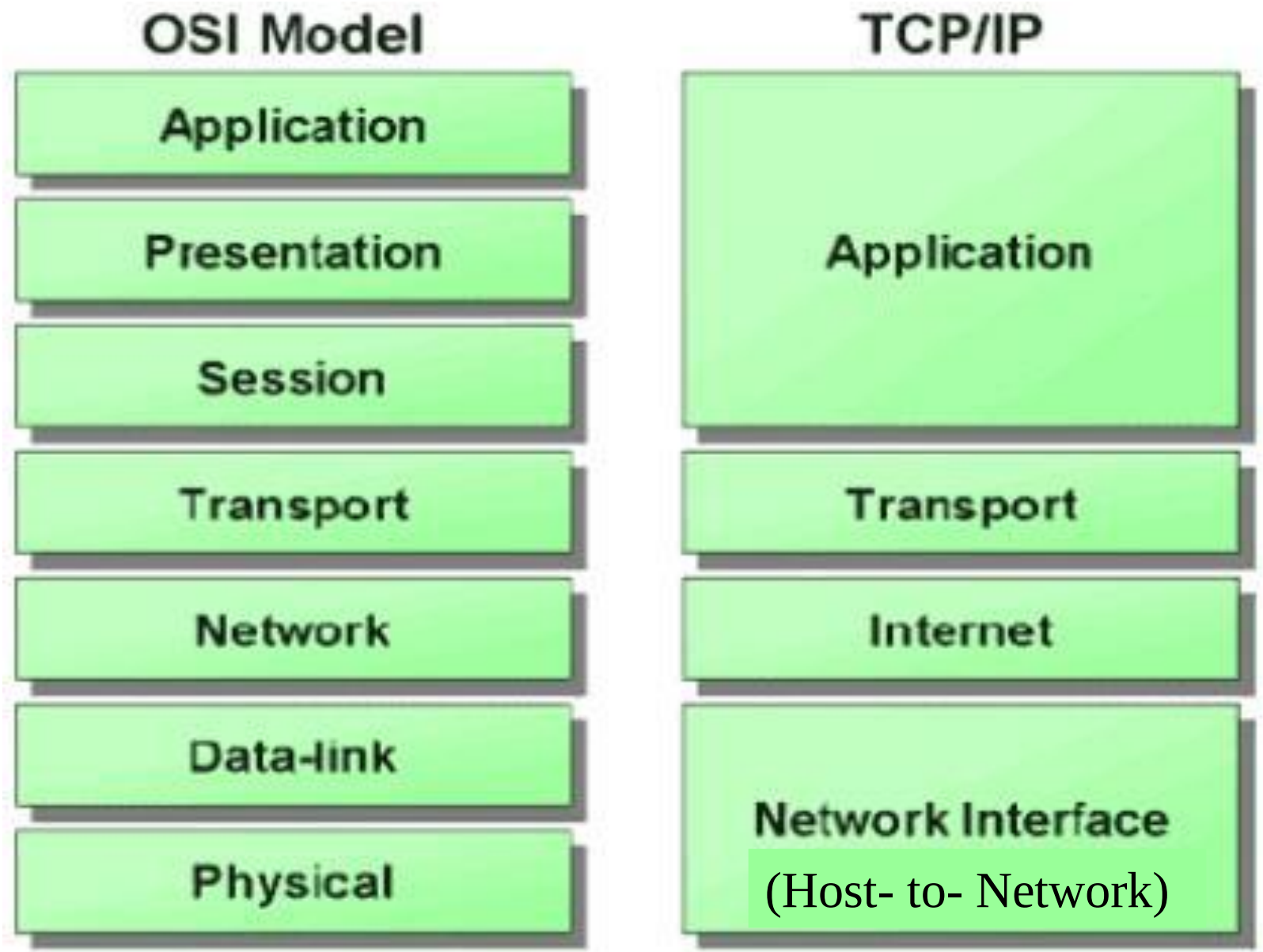
Comparison between OSI Model & TCP/IP Model

INTRODUCTION

The OSI and TCP/IP models are having many similarities in the functionalities provided by the layers. The layers of TCP model behave similar to the layers of OSI model. But these two models do have differences.



TCP/IP and the OSI model

SIMILARITIES

The main similarities between the two models include the following:

- **They share similar architecture.** - Both of the models share a similar architecture. This can be illustrated by the fact that both of them are constructed with layers.

- **They share a common application layer.-** Both of the models share a common "application layer". However in practice this layer includes different services depending upon each model.

SIMILARITIES

- **Both models have comparable transport and network layers-** This can be illustrated by the fact that whatever functions are performed between the presentation and network layer of the OSI model similar functions are performed at the Transport layer of the TCP/IP model.

- **Both models assume that packets are switched-** Basically this means that individual packets may take differing paths in order to reach the same destination.

DIFFERENCES

The main differences between the two models are as follows:

- TCP/IP Protocols are considered to be standards around which the internet has developed. The OSI model however is a **"generic, protocol- independent standard.“**
- TCP/IP combines the presentation and session layer issues into its application layer.
- TCP/IP combines the OSI data link and physical layers into the network access layer.

DIFFERENCES

- TCP/IP appears to be a more simpler model and this is mainly due to the fact that it has fewer layers.

- **TCP/IP is considered to be a more credible model-** This is mainly due to the fact because TCP/IP protocols are the standards around which the internet was developed therefore it mainly gains creditability due to this reason. Where as in contrast networks are not usually built around the OSI model as it is merely used as a guidance tool.

- The OSI model consists of 7 architectural layers whereas the TCP/IP only has 4 layers.

COMPARISON

OSI Model	TCP/IP Model
OSI stands for Open System Interconnection because it allows any two different systems to communicate regardless of their architecture.	TP/IP stands for Transmission Control Protocol/Internet Protocol. It is named after these protocols, being part of this model.
OSI model has seven layers.	TCP/IP has four layers..
This model provides clear distinction between services, interfaces and protocols	It does not clearly distinguish between services, interfaces & protocols.

COMPARISON

OSI Model	TCP/IP Model
In this model, Protocols do not fit well into the model.	TCP and IP protocols fit well in the model.
Session & Presentation layers are present in this layer.	There is no session & presentation layer in this model.
OSI model supports both connection oriented & connectionless in network layer but connection oriented comm. In transport layer.	TCP/IP supports only connectionless comm. In network layer but supports both in transport layer.

Thanks a lot