

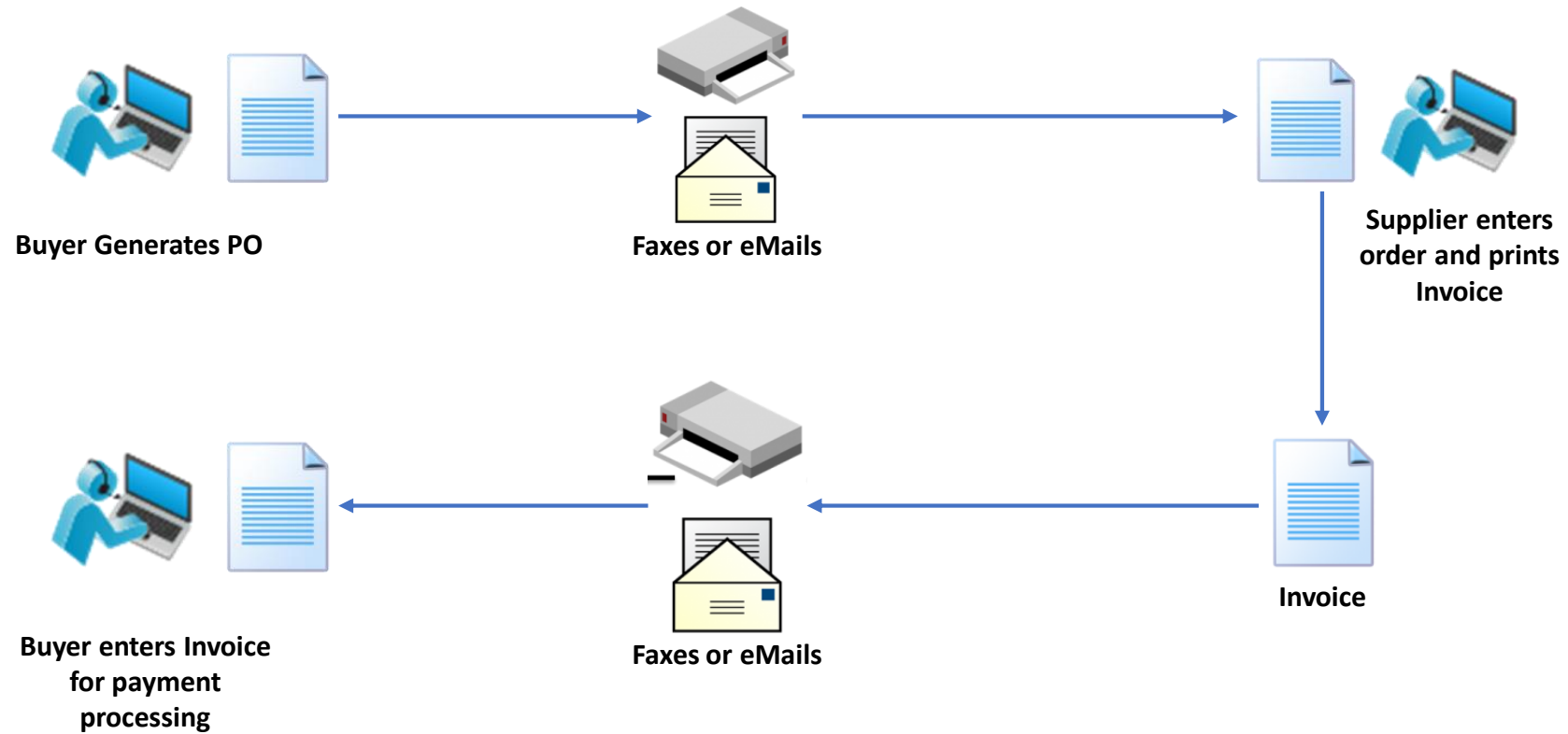
EDI

Electronic Data Interchange

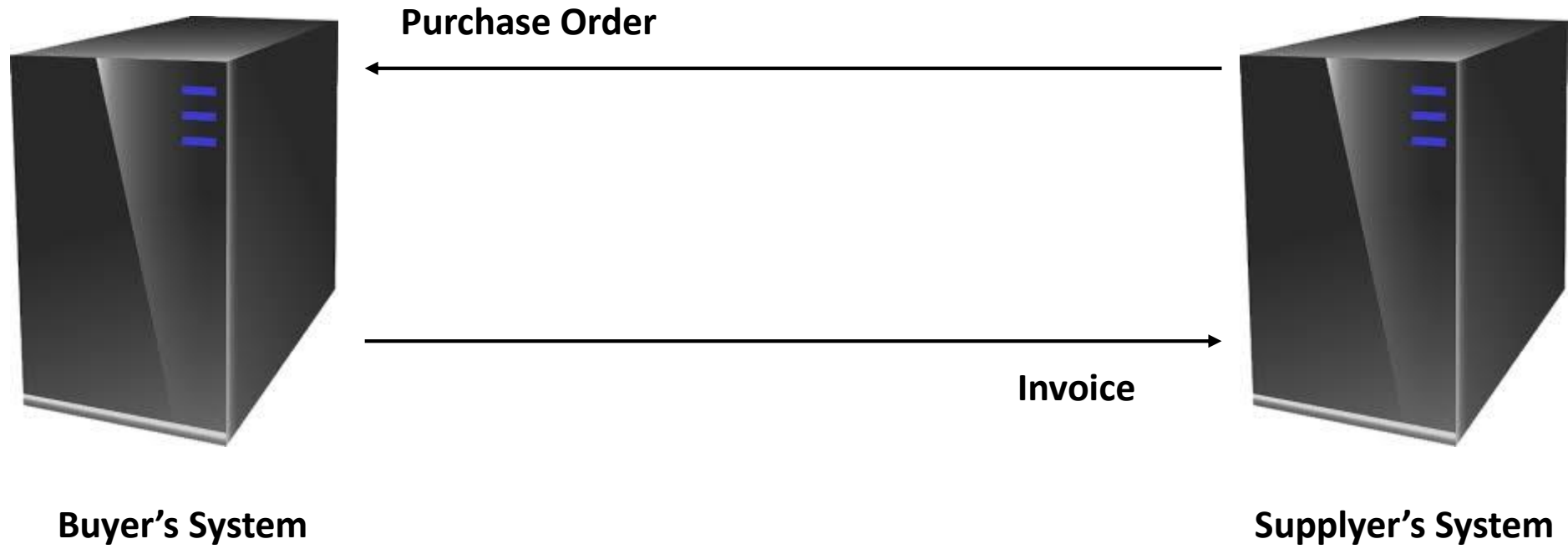
Definitions

- Electronic Data Interchange (EDI) - the computer-to-computer exchange of business documents in a standard electronic format between business partners.
- Where
 - Computer-to-computer – No people involved.
 - Business Document - Purchase Orders, Invoices, Banking Transactions, Insurance Data, Shipping Notice, Bill of Lading, Payments, etc.
 - Standard Format - describing what each piece of information is and in what format.
 - Business Partners – a.k.a. Trading Partners, under agreement

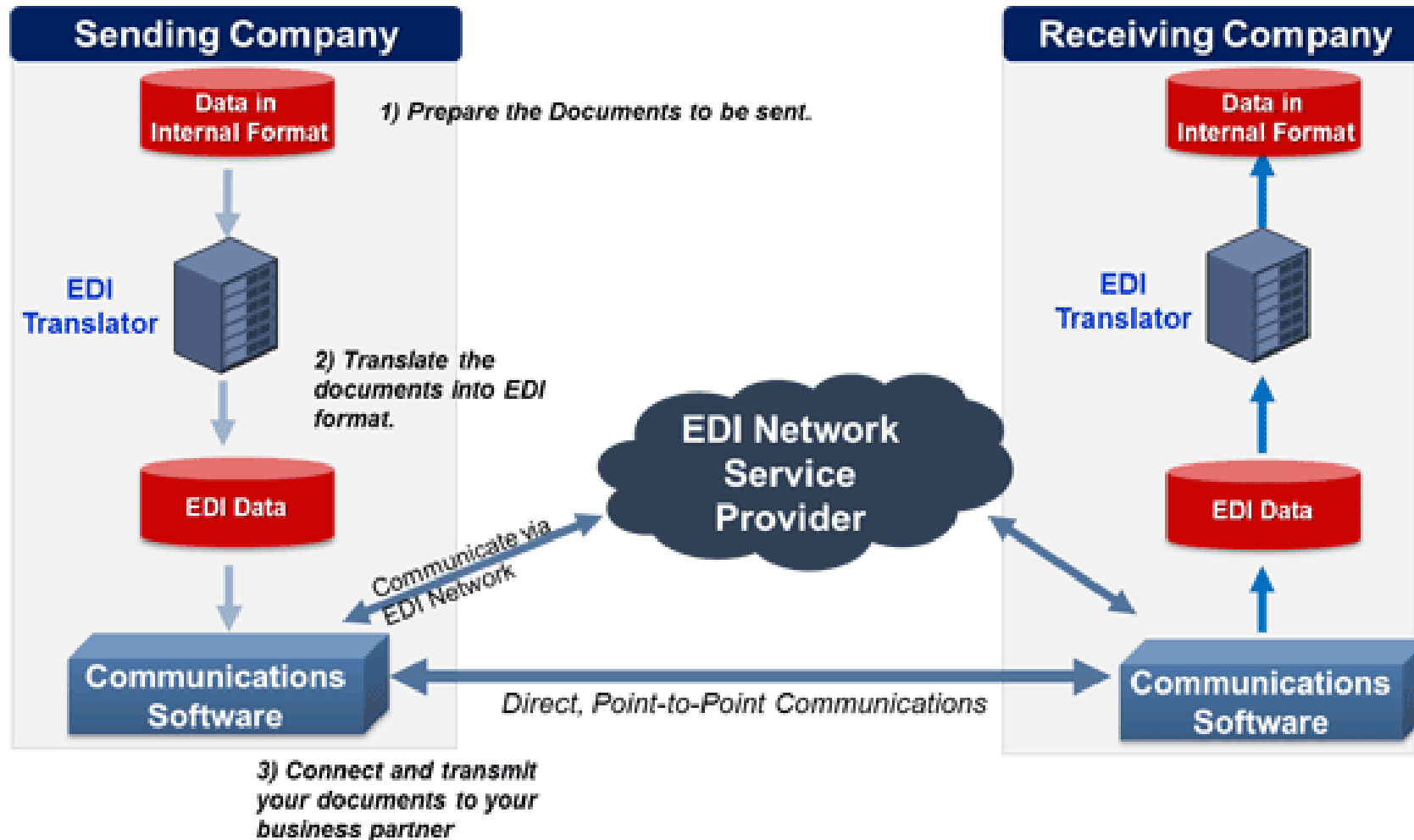
Paper-Based Process



With EDI



How does EDI Work?



EDI Standards

- UN/EDIFACT – United Nations Electronic Data Interchange for Administration, Commerce and Transportation
- ANSI ASC X12 – Accredited Standards Committee X12; Communications and Controls, Finance, Transportation, Tech. Assessment, Supply Chain, Insurance
- GS1 – Labeling of Goods, Locations, Parties, and Packages
- TRADACOMS – UK Retail Industry
- HL7 – Health Level 7, Electronic Health Information
- SOAP – XML-Based Standard

SOAP Example

```
<?xml version="1.0"?>
<SOAP-ENV:Envelope xmlns:SOAP-
ENC="http://schemas.xmlsoap.org/soap/encoding/"
xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
<SOAP-ENV:Body>
<UPDATE__CompIntfc__SDK_BUS_EXP>
  <SDK_EMPLID>8001</SDK_EMPLID>
  <SDK_BUS_EXP_PER>
    <SDK_EXP_PER_DT>08/14/2002</SDK_EXP_PER_DT>
    <SDK_BUS_EXP_DTL>
      <SDK_CHARGE_DT>08/14/2002</SDK_CHARGE_DT>
      <SDK_EXPENSE_CD>01</SDK_EXPENSE_CD>
      <SDK_EXPENSE_AMT>1234.56</SDK_EXPENSE_AMT>
      <SDK_CURRENCY_CD>USD</SDK_CURRENCY_CD>
      <SDK_BUS_PURPOSE>Client Visit</SDK_BUS_PURPOSE>
      <SDK_DEPTID>10100</SDK_DEPTID>
    </SDK_BUS_EXP_DTL>
  </SDK_BUS_EXP_PER>
</UPDATE__CompIntfc__SDK_BUS_EXP>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

UN/EDIFACT Example

UNB+UNOA:1+005435656:1+006415160:1+060515:1434+00000000000778'
UNH+00000000000117+INVOIC:D:97B:UN'
BGM+380+342459+9'
DTM+3:20060515:102'
RFF+ON:521052'
NAD+BY+792820524::16++CUMMINS MID-RANGE ENGINE PLANT'
NAD+SE+005435656::16++GENERAL WIDGET COMPANY'
CUX+1:USD'
LIN+1++157870:IN'
IMD+F++:::WIDGET'
QTY+47:1020:EA'
ALI+US'
MOA+203:1202.58'
PRI+INV:1.179'
LIN+2++157871:IN'
IMD+F++:::DIFFERENT WIDGET'
QTY+47:20:EA'
ALI+JP'
MOA+203:410'
PRI+INV:20.5'
UNS+S'
MOA+39:2137.58'
ALC+C+ABG'
MOA+8:525'
UNT+23+00000000000117'
UNZ+1+00000000000778'

EDI Risks

- Transaction Authorization is the biggest risk!
- Unauthorized access to electronic transactions
- Deletion or manipulation of data before establishing control
- Transaction loss or duplication
- Improper distribution of transactions

Controls

- Enforce data standards
- Data Encryption
- Verify Authorization
- Transaction Receipts
- Reasonableness of transaction – CHECKSUM, Hash Value, Verification Algorithms
 - Header Record
 - Detailed Record

Auditing EDI

Main Concern:
Transactions are accurately translated, passed to an application, and processed only once

