	UNIT ID: 2302
Domain	**NETWORKING**
Title:	**Demonstrate an understanding of data communication principles and applications**
Level: 4	**Credits: 6**

Purpose

This unit standard is intended for those who demonstrate an understanding of data communication principles and applications. People credited with this unit standard are able to describe synchronous and asynchronous data communication, describe computer network types and standards, demonstrate knowledge of features of Local-Area Network (LAN), demonstrate knowledge of main features of Wide Area Network (WAN) and demonstrate knowledge of main features of wireless.

This unit standard is intended for those who work in the networking environment.

Special Notes

1. Entry information:

   Prerequisites:

   - None

2. Assessment evidence may be collected from a real or a simulated workplace in which networking operations are carried out.

3. Tools and equipment may include but are not limited to computer, external devices, storage devices and other and basic computer applications.

4. Performance of all elements in this unit standard must comply with industry standards.

5. Regulations and legislation relevant to this unit standard include the following:
   - Labour Act 2007(Act No 11, 2007).
   - Regulations relating to the health & safety of employees at work under schedule 1 (2) of the Labour Act No.11 of 2007 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this sub-field may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available

from the Namibia Qualifications Authority on www.namqa.org and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Describe synchronous and asynchronous data communication

Performance Criteria

1.1 Synchronous and asynchronous data communication is described in terms of the characteristics.

1.2 Features of data communications equipment are described and explained.

Element 2: Describe computer network types and standards

Performance Criteria

2.1 Types of networks are described.

2 .2 Network topologies are compared.

2.3 Institute of Electrical and Electronics Engineers (IEEE) network standards are complied with.

Element 3: Demonstrate knowledge of features of Local-Area Network (LAN)

Range

LAN technologies may include but not limited to Ethernet, Token-ring and FDDI

Performance Criteria

3.1 LAN topologies are explained.

3.2 LAN transmission media are explained.

3.3 Operation of LAN technologies is described.

3.4 Functionality of LAN devices is described.

Element 4: Demonstrate knowledge of main features of Wide Area Network (WAN)

Range

WAN technologies may include but not limited to Ethernet, Token-ring and FDDI

Performance criteria

4.1 WAN topologies are explained.

4.2 WAN transmission media are named.

4.3 Operation of WAN technologies is described.

4.4 Functionality of WAN devices is described.

Element 5: Demonstrate knowledge of main features of Wireless

Performance criteria

5.1 Wireless technologies are explained.

5.2 Features of wireless networks are specified.

5.3 Advantages of wireless networks are specified.

5.4 Shortcomings of wireless networks are explained.

Registration Data

Subfield:	Information and Communication Technology
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Anticipated review:	2025
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