Government Polytechnic Jalgaon

Academic Year 2019-20

Course Code

Digital Communication System

(22428)

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MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

GOVERNMENT POLYTECHNIC, JALGAON

(0018/1567)

Program Name and Code: ELECTRONICS &TELICOMMUNICATION

Course Name And Code :Digital Communication System(22428)

Academic Year : 2019-20

Semester : Fourth.

A MICRO PROJECT

on

To Build Circuit Of Genrate PN Sequence For Maximum Length

Submitted on 2020 by the group of 5 students.

Sr. No.	Roll No.	Name of student	Enrollment No.	Seat No.
1	13	Prathamesh saraf	1800180265	379823
2	29	Aakanksha khairnar	1800180286	379839
3	30	Mohit bhangale	1800180288	379840
4	32	Mandar patil	1800180290	379841
5	33	Mohish khadse	1800180291	379842

MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

Certificate

This is to certify that Master Mr/Ms. **Prathamesh , Aakanksha , Mandar ,Mohish, mohit** Roll No.**13,29,30,32,33** Of **4th** Semester of Diploma in **E&TC.** Of Institute, **Government Polytechnic, Jalgaon (Code:0018/1567)** has completed the **Micro Project** satisfactorily in the Subject Digital Communication System (22428) for the Academic Year 2019- 2020 as prescribed in the curriculum.

Place**: Jalgaon** Enrollment No:-

1800180265,1800180286,1800180288,1800180290,1800180291

Date:-

Exam. Seat No:- 379823, 379839,379840, 379841, 379842

Subject Teacher **Head of the Department** **Principal**

Seal of Institution

TITLE

To Build Circuit Of Genrate PN Sequence For Maximum Length

Submitted by-:

1. prathamesh saraf (13)
2. aakanksha khairnar(29)
3. mohit bhangale (30)
4. mandar patil(32)
5. mohish khadase(33)

under the guidance of:

V.B.Patil Mam

Rational

Communication technologies have undergone radical chages ,especially due to convergence of the computers and communication. No industry is untouched by the digital comunnication . this course will enable the diploma engineers to apply facts ,concepts and working principle of digital communication for the troubleshooti and maintenace of digitalcommunication system.the concept and principles of digital communication will also lay the foundation to understand the various morden communication sytems.

Course outcome

the theory, pratical experiences and relevant soft skills associated with this course are to be taught and implemented so that the student demonstrates the following industry oriented co's associated with the mentioned compentency;

a) analysis various error detection and correction codes in digital communication system .
b) maintain spread spectrum based system .
c) multiplex and demultiplex digital singales.

List of intrument:-

Sr No	Name Of Resource	Specification	Quantity
1	IC	7474	2
2	IC	7486	1
3	LED	Blue and white	4
4	Connecting wire	Single strand	As per kit requirement

Pseudo-noise (PN) sequence in generation :-

A pseudo-noice (PN) sequence is defined as a coded sequence of 1s and 0s with certain auto-correction properties.

Use of sequence is s.s.:

I. the PN sequence is is a random sequence which is impressed on the transmitted single at the transmitter to spred the single randomly over a larger frequncy spectrum.
II. Due to the random nature of the S.S. transmittedsingle appear to be the noise single to all the receivers except the desired receiver .

Block diagram;

i. The PN sequcence genrator is as shown in fig . this is basically a sgift regiter .
ii. Typr D filp folps are benig connected such that D input to a filp flop is connected the Q output of the privious filp flop .
iii. The input do of the first D flip flop has been connected to the output of the parity genrator .a priarity genrator generally consits of exclusive-OR gates .

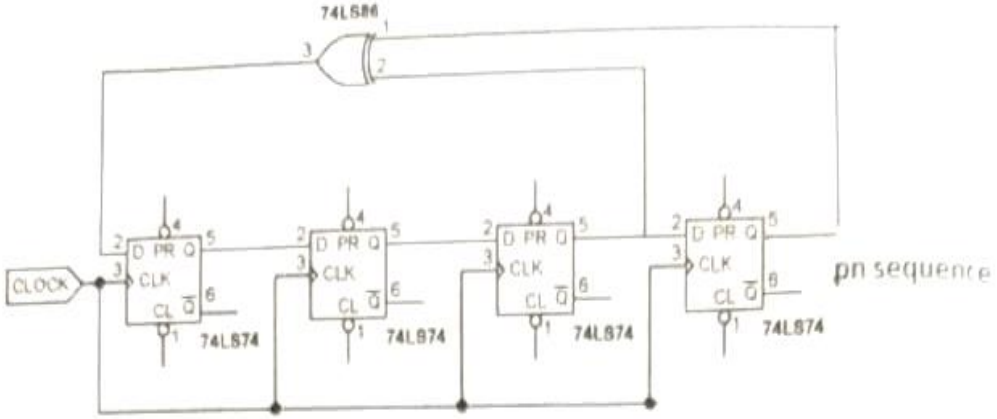

Fig no.1: A pseudo-random sequence generator

Clock Pluse no	Shift register output Q3 Q2 Q1	Ex-or gate output Q3 + Q2	PN sequence Q3
0	0 0 1	0+0=0	0
1	0 1 0	0+1=1	0
2	1 0 1	1+0=1	1
3	0 1 1	0+1=1	0
4	1 1 1	1+1=0	1
5 6	1 1 0 1 0 0	1+1=0 1+0=1	1 1
7	0 0 1	0+0=0	0
8	0 1 0	0+1=1	0
9	1 0 1	1+0=1	1
10	0 1 1	0+1=1	0

- **Application**:
  - Collection of information
  - Collection of require resources.
  - Them All the resoueces like
    i. Books
    ii. Internet
    iii. Computer

- **RESOURCES REQUIRED:-**

The resources required to test the various electronic components.

i. Books
ii. Internet
iii. Websites

Books:- Forouzan, Behrouz, Digital communication & Networking.

Websites:-WWw.wikipedia.com

- **Learning the from this project :-**

From this micro project become to know about PN sequence . what things are used make them and we come to know that there are various types of fault in kits. By this process we also learn how to check various faults in intruments.