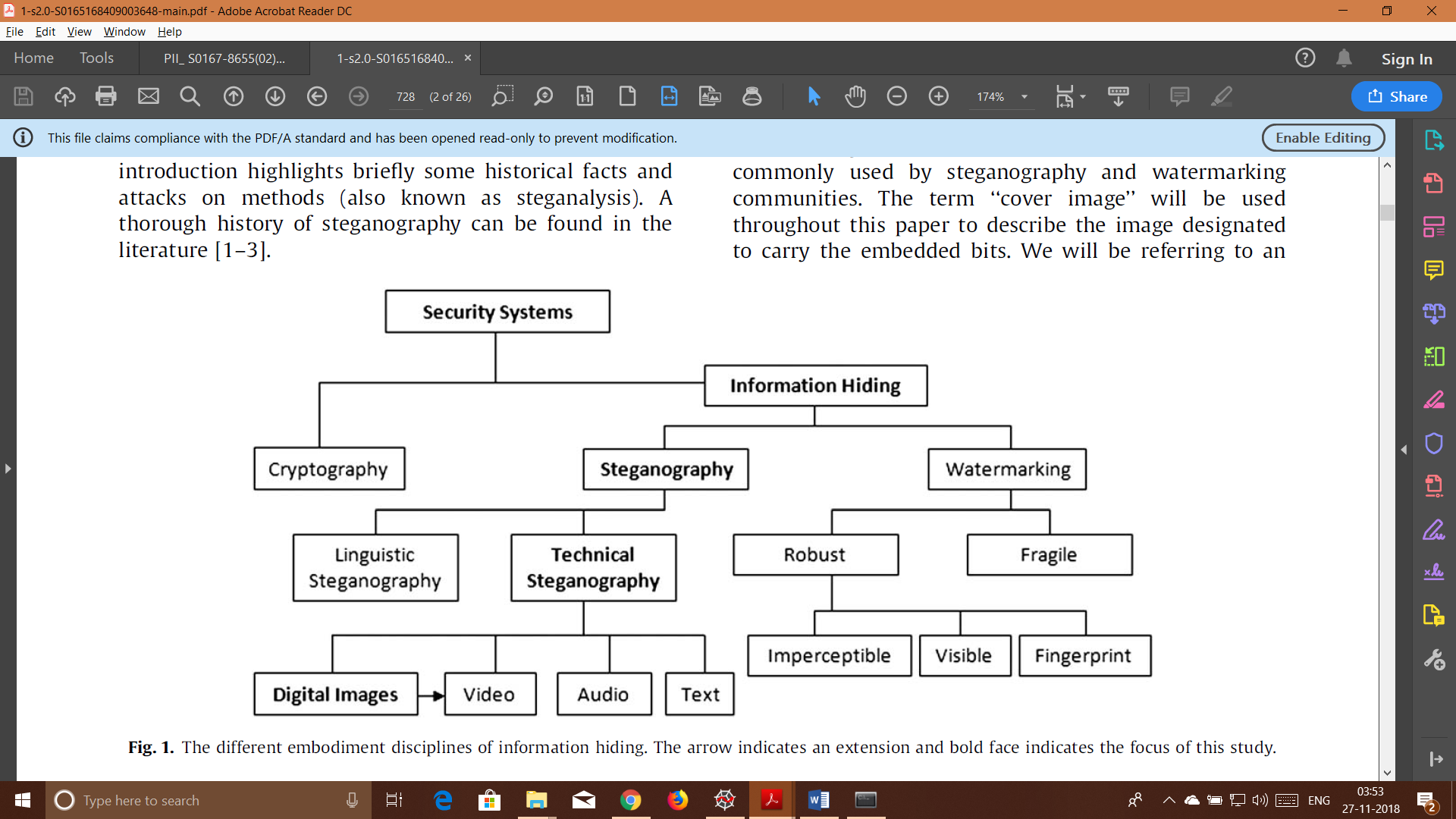
METHODS IN DIGITAL STEGANOGRAPHY

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# **Introduction**

Steganography is the science that involves communicating secret data in an appropriate Multimedia carrier, e.g., image, audio, and video files. It comes under the assumption that if the feature is visible, the point of attack is evident, thus the goal here is always to conceal the very existence of the embedded data.



## Problem Statement

## Problem Motivation

# Overview

Cover Image

Payload Image

Stego Image

Extracted Cover Image

Extracted Payload Image

EMBEDDING PROCESS

**Communication channel**

EXTRACTION PROCESS

Stego Image

# Methods Of Steganography

## Least Significant Bit Substitution

Cover Image

Payload Image

n Most Significant Bits

(8-n) Least Significant Bits

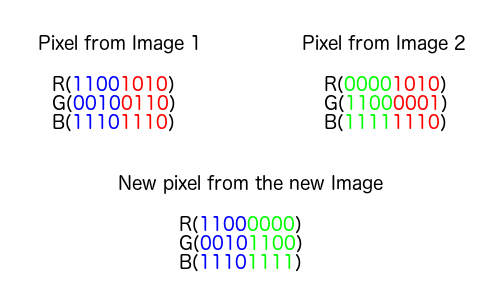
Stego Image

Extracted Cover Image

Extracted Payload Image

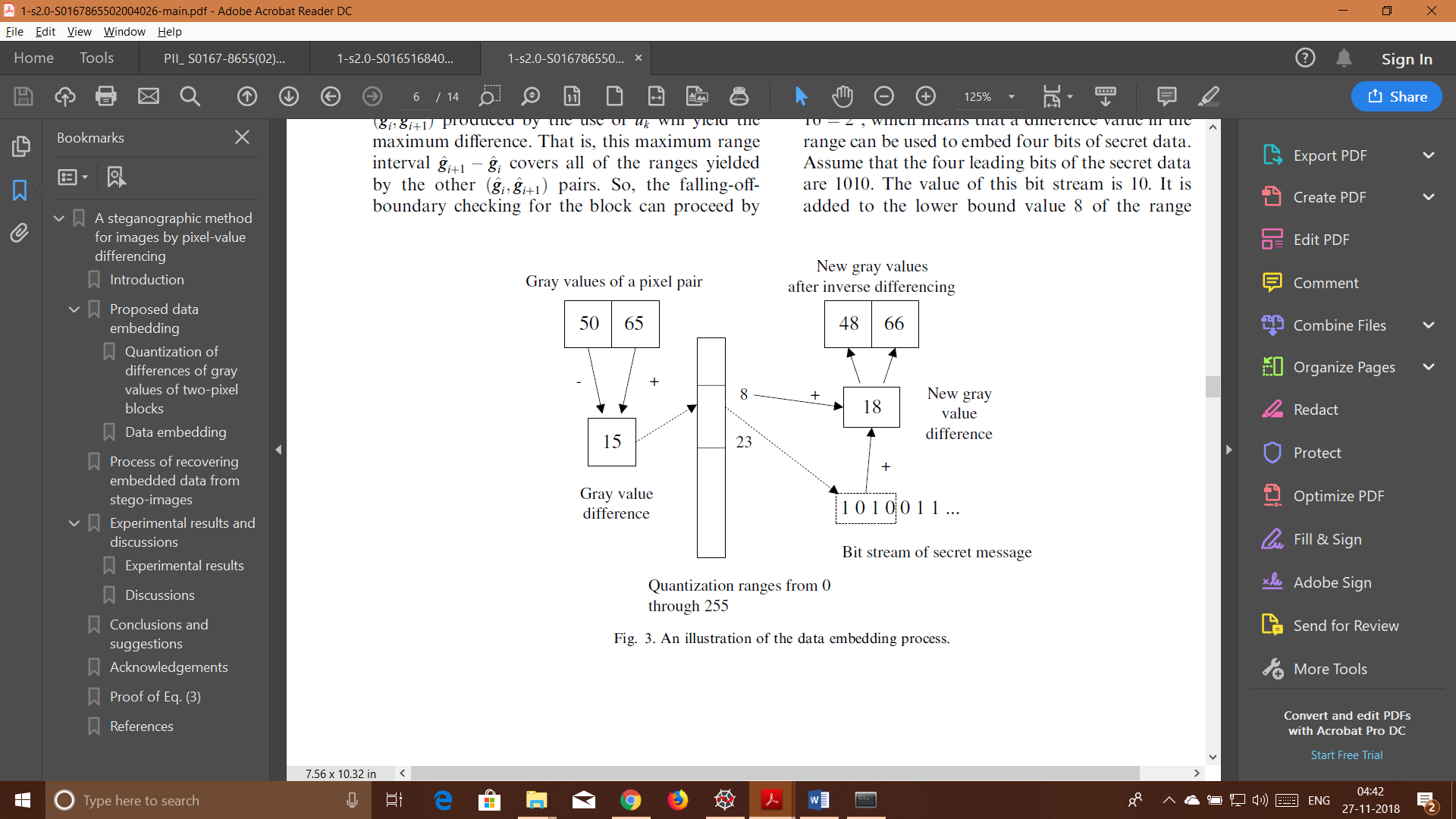
n Most Significant Bits

(8-n) Least Significant Bits



## Discrete Cosine Transform

## Pixel Value Differencing



## Method 2

## EMD

## Edge Based

## Block Complexity Based

Cover Image

Payload Image

Stego Image

Divide into nxn blocks

Compute BPC of each plane

Divide into 8 bit planes

Compute number of bits to replace ‘m’

Divide into nxn blocks

Divide into 8 bit planes

Compute complexity conjugate

Compute BPC of each plane

If BPCS < threshold



Get ‘m’ most significant bits

Get (8-‘m’) least significant bits

Embed

# Experimental Results

## Least Significant Bit Substitution

## Discrete Cosine Transform

## Pixel Value Differencing

## Method 2

## EMD

## Edge Based

## Block Complexity Based

## Comparison

# Conclusion And Future Work

# References