MOBILEARNING for Management Engineering

DIPARTIMENTO DI ELETTRONICA,INFORMATICA E SISTEMISTICA

Universita' della Calabria

Ornella Pisacane

Rende,15 febbraio

Soggetti Coinvolti

Ottimizzazione Finanziaria (undergraduate)

Logistica (graduate)

Sistemi di supporto alle decisioni in ambito medico (graduate)

Sistemi informativi (graduate)

Commercio elettronico (undergraduate)

Monterey, 7-8 Febbraio

MOBILEARNING for Management Engineering

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http://www2.deis.unical.it/deis1.0/portale/didattica/cdlgest/hpgrant/index.cfm

PROJECT ABSTRACT: The aim of the project is to extend the mobile technology environment of UNICAL within the teaching courses of the Management Engineering degree using the Tablet PC wirelessly connected granted by HP to go deeper into our educational technology vision, aiming at implementing new teaching-and-learning models. The project should represent a first advanced pilot experience for evaluating the effectiveness of new educational paradigms, in the Engineering Faculty, outlining their advantages and drawbacks with respect to traditional models. By exploiting the communication infrastructure of our department and previous experiences in mobile technology, we expect that our experience would become a commonplace across the different engineering courses. In this way we foresee an improvement of the learning level of the future management engineers.

Impact on Student Learning

Reorganizing the course structure both in the theory and practice sessions and considering some collaborative activities which can improve the learning process, Students are expected to benefit by the definition of the new teaching-and-learning models which allow: *a higher level of interactivity* between teacher and learners and among the learners, both during and off the class hours; *the possibility to elaborate information* from different sources: the student can write down annotations to the lessons material, record questions, acquire additional material from Internet or other sources; *a better integration* between theoretical foundations and practice.

One Year Ago – In the past, the students had been obliged to listen the lessons and to do their homework at home without any type of interactions with the teachers. It meant to learn in a passive way and sometime it became very difficult to understand some theoretical concepts.

Today – Using the technology grant by HP and implementing new teaching paradigms, the students are more interested in the courses and lessons. In fact, for example, using Internet they are able to go deeper the lessons.

One Year From Now -The main expected outcome from the learner perspective is an improvement of the learning process by means of: a higher level of active participation and interaction; the possibility of integrating theoretical, simulative and experimental approaches; a deeper understanding of the course contents. Moreover using HP technology, the teachers can define some lesson videos in order to allow the students, who can not attend the courses, to study and listen the lessons at home.

Impact on Teaching

The most relevant aspect is an evident improvement of the learning level of the students. Considering some recent results, for example, using this new teaching-learning approach, about 90% of the students are able to pass the exam with a very high level.
Three measures are considered : **satisfactory level,** a set of questions concerning the course quality and a set of suggestions for the course improvement; **Self-grading tests,** include a set of self-examination tests, which are prepared and assigned as homework to the students. Tests, assigned electronically, consist of a step-by-step solution of complex problems; **Examination marks** that include intermediate tests.

Technology Implementation

The mobile technology will be used for the realization of the virtual mobile laboratory, where lessons and practice sessions of the involved courses will be held. Tablet PCs will be equipped with educational versions of software tools for optimization, simulation and hardware emulation.

Keywords: management engineering, logistics, optimization

Principale Obiettivo

Human mind like a “storage bin”????

KNWOLEDGE IS CONSTRUCTED AND NOT RECEIVED!!!!

Corso di Logistica 1

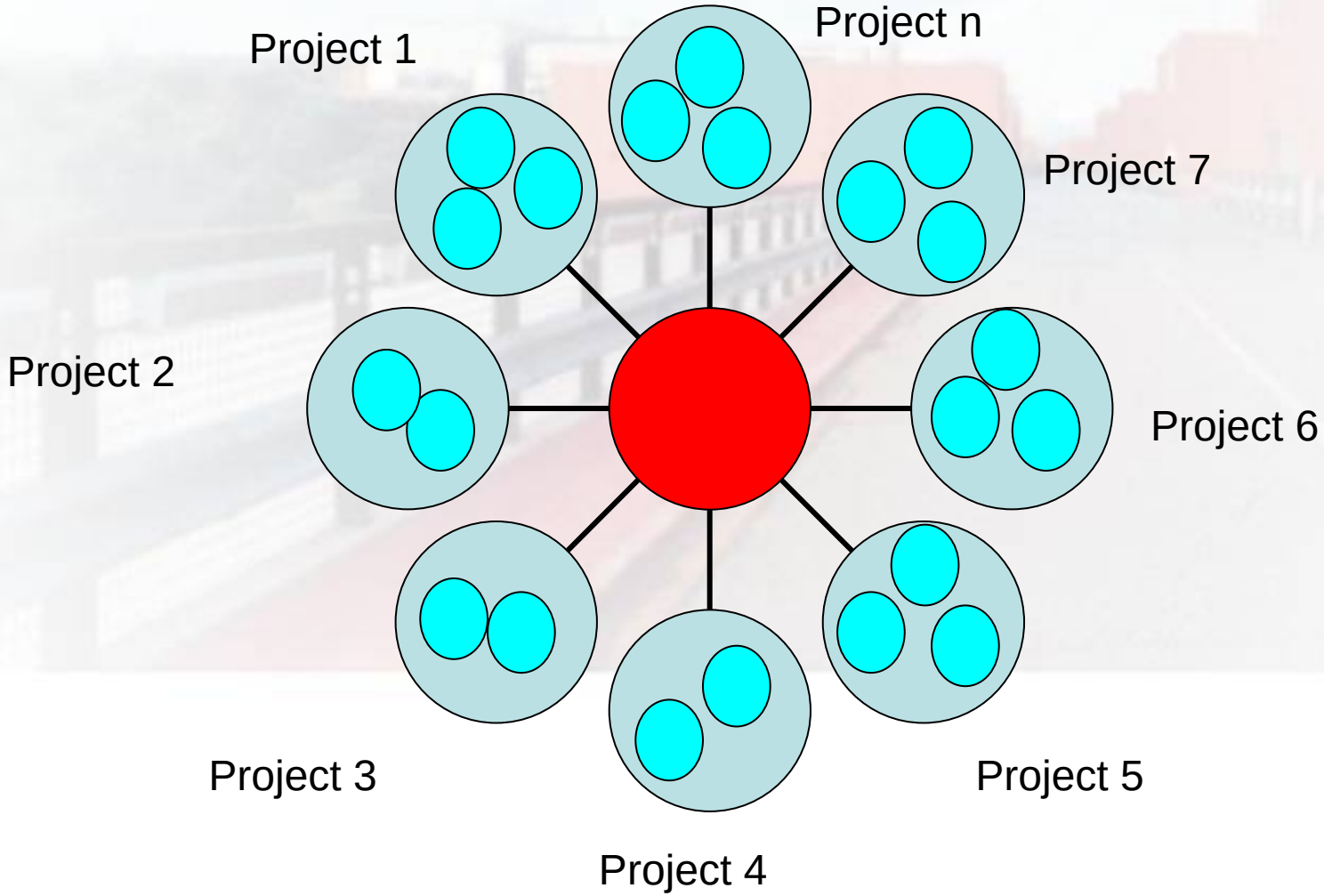
Selezionare un gruppo di studenti;

Nuovo corso:

due differenti momenti:

1. **Aspetti teorici;**

2. **Ricerca sul web e sperimentazioni ;**


Project 1
Project n
Project 7
Project 2
Project 6
Project 3
Project 5
Project 4

Homework

Risolvere i problemi della vita reale;

Inviare i propri lavori usando il link “Lavori” con ICampus;

Attendere un feedback (valutazione);

Modificare eventualmente il proprio elaborato sulla base delle indicazioni fornite dal docente

Problematiche considerate

Tipici problemi logistici (esempio:allocazione della domanda ai nodi logistici….):

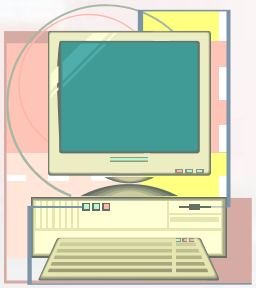
Variabili decisionali;

Vincoli;

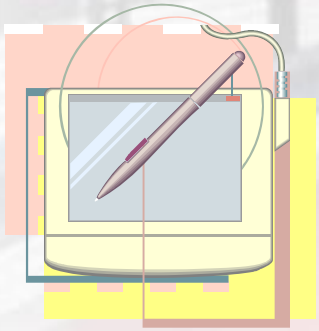
Funzione obiettivo (max o min)

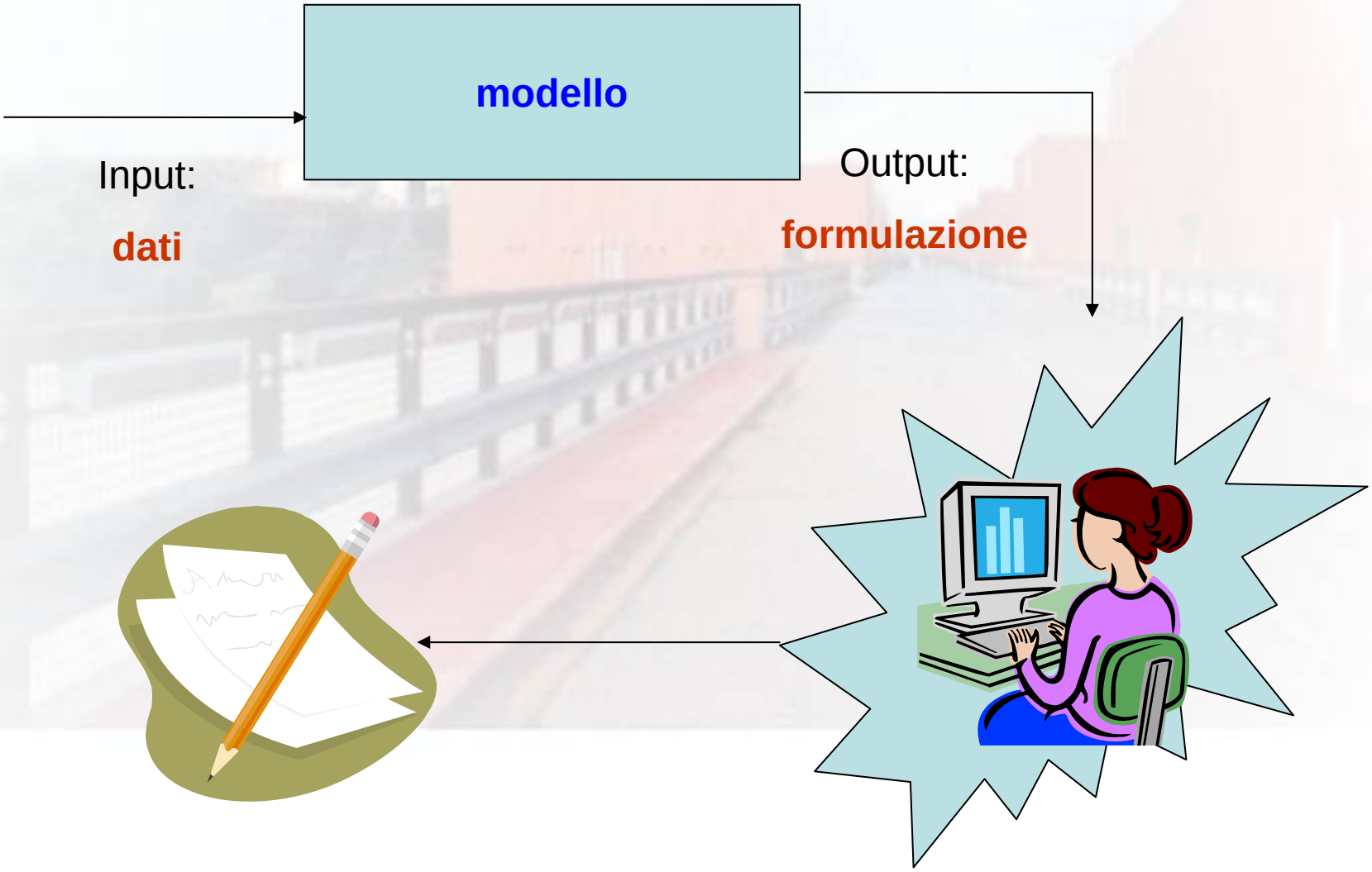
Come usare il grant HP?

Laptop modalità classica

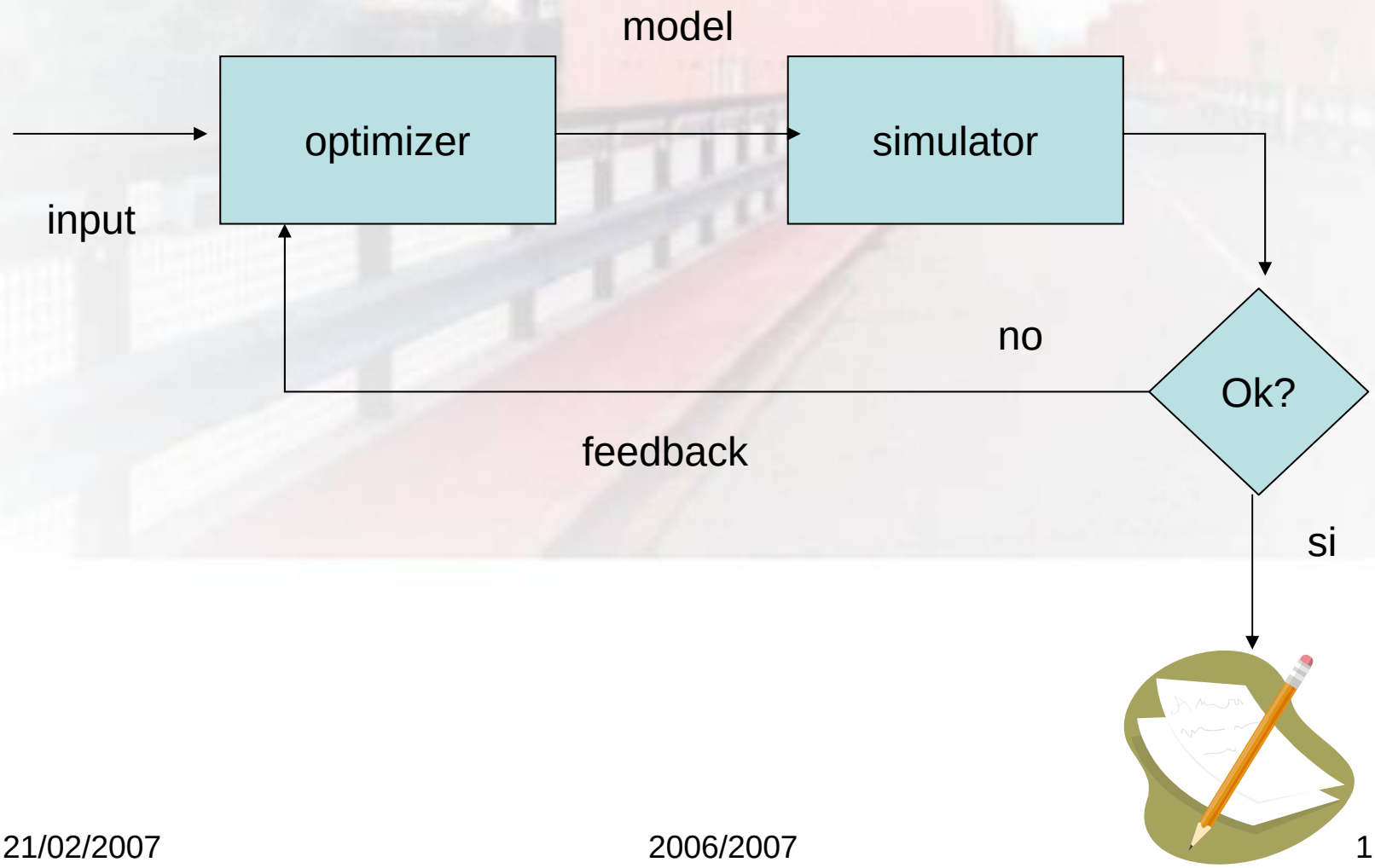


Tablet PC



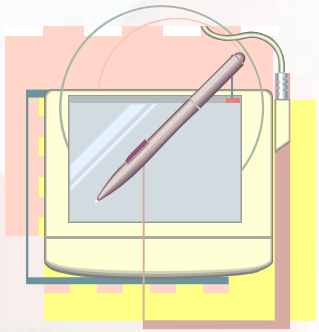

modello
Input:
dati
Output:
formulazione

Simulation-Optimization models



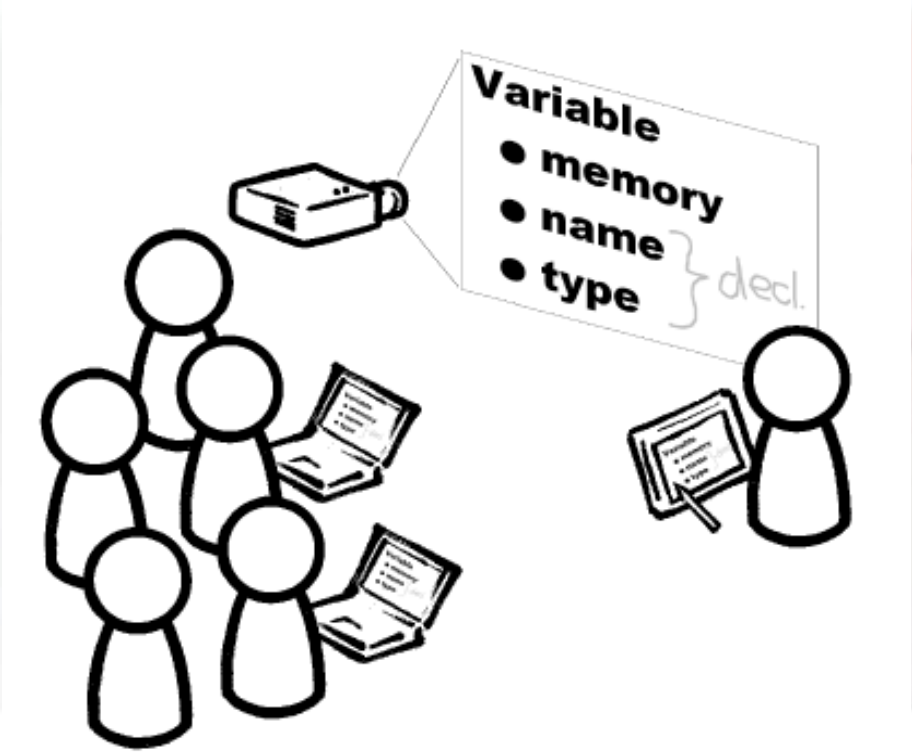
Slides dinamiche durante la lezione;

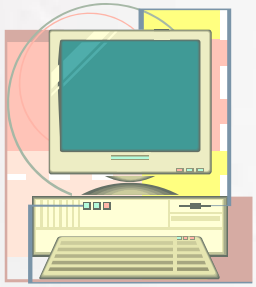
Note durante la lezione sullo schermo;

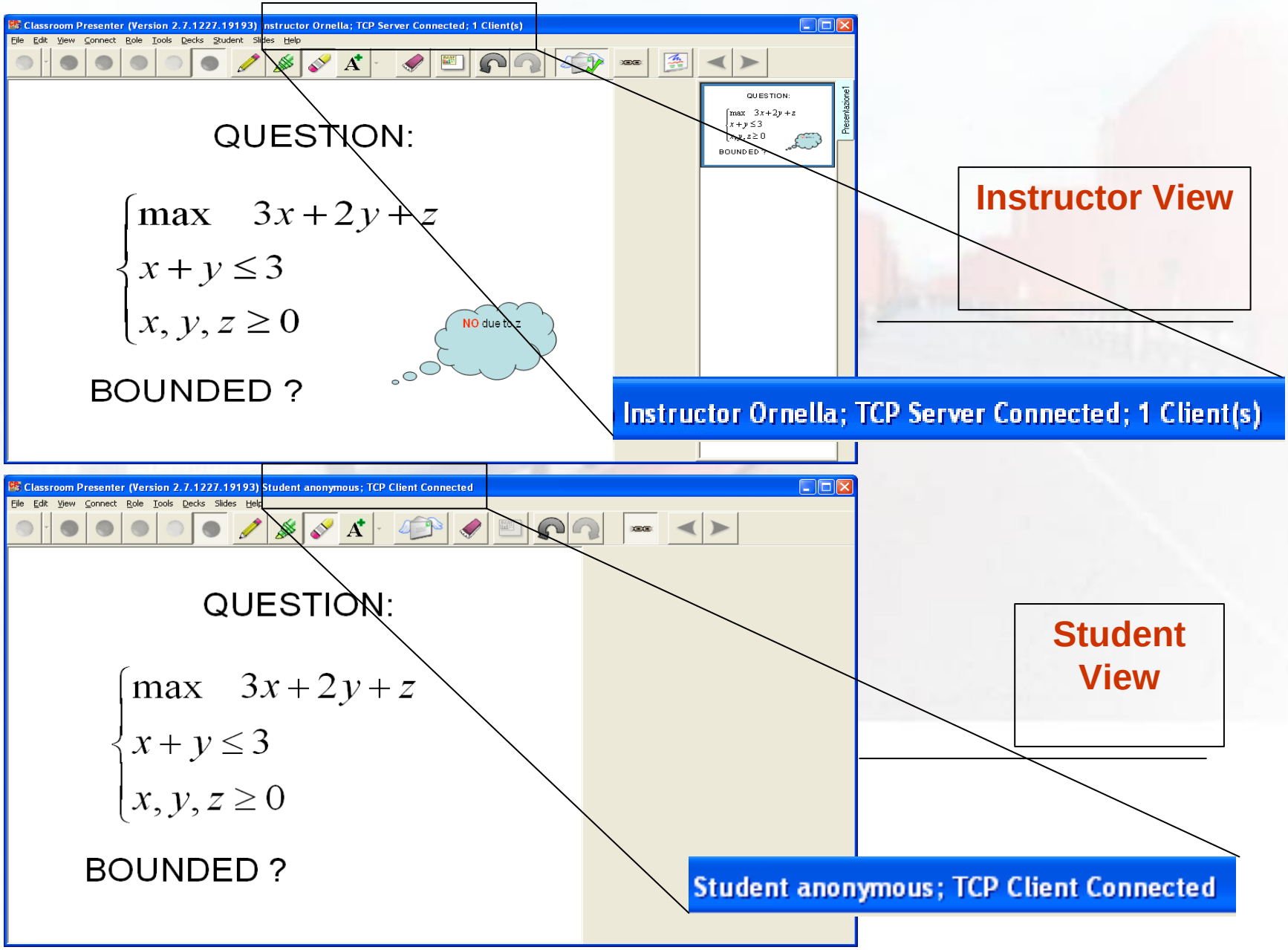


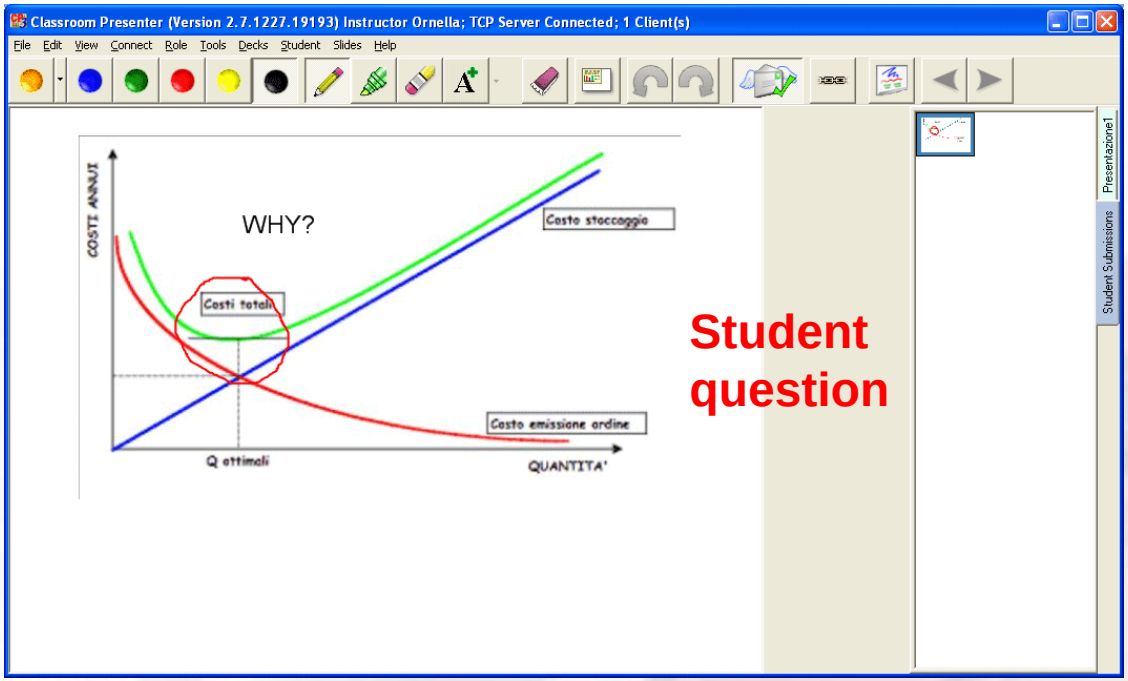
Approccio grafico per risolvere problemi di ottimizzazione

Classrom Presenter



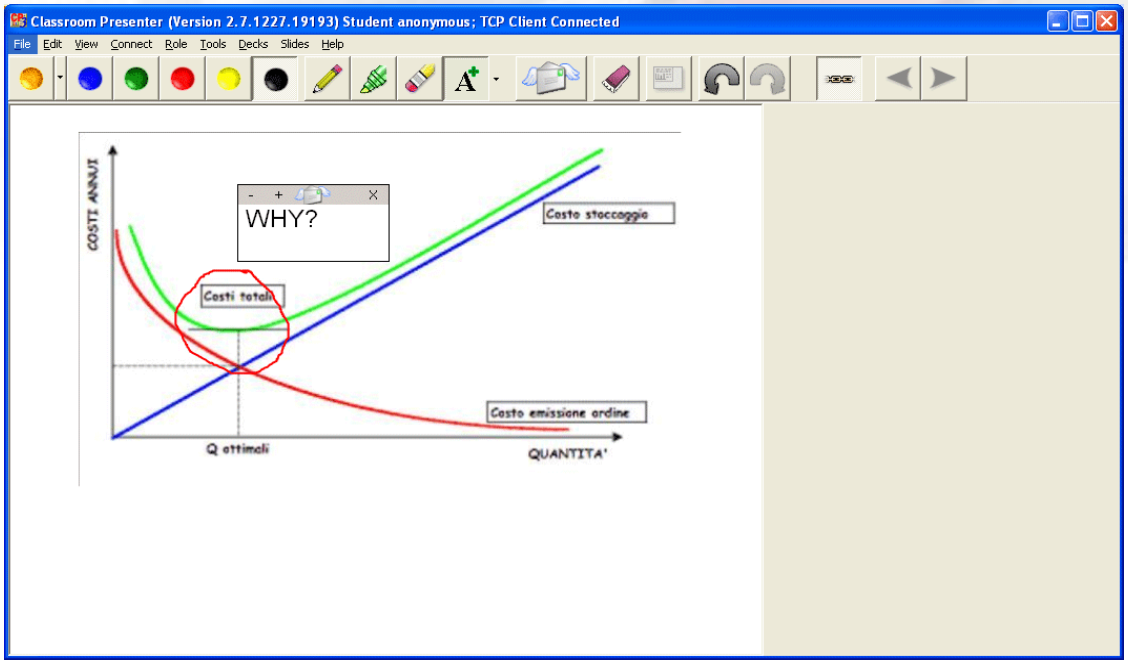



Classroom Presenter (Version 2.7.1227.19193) Instructor Ornella; TCP Server Connected; 1 Client(s)
File Edit View Connect Role Tools Decks Student Slides Help
QUESTION:
$\max \quad 3x+2y+z$
$x+y \le 3$
$x, y, z \ge 0$
BOUNDED ?
NO due to z
Presentazione1
Instructor View
Instructor Ornella; TCP Server Connected; 1 Client(s)
Classroom Presenter (Version 2.7.1227.19193) Student anonymous; TCP Client Connected
File Edit View Connect Role Tools Decks Slides Help
QUESTION:
$\max \quad 3x+2y+z$
$x+y \le 3$
$x, y, z \ge 0$
BOUNDED ?
Student View
Student anonymous; TCP Client Connected



Student question

Instructor View



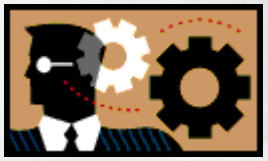
Student View

Wireless

Studenti: approfondire gli argomenti

Studenti & tutor: comunicare durante le lesioni e ricevere feedback (intra-campus)

Alcuni risultati



Teaching

Learning

Internet