

WHAT MAKES IT HARD TO TEACH SOFTWARE ENGINEERING TO END USERS? SOME DIRECTIONS FROM ADAPTIVE AND PERSONALIZED LEARNING

Sridhar Chimalakonda

Advisor: Prof. Kesav V. Nori

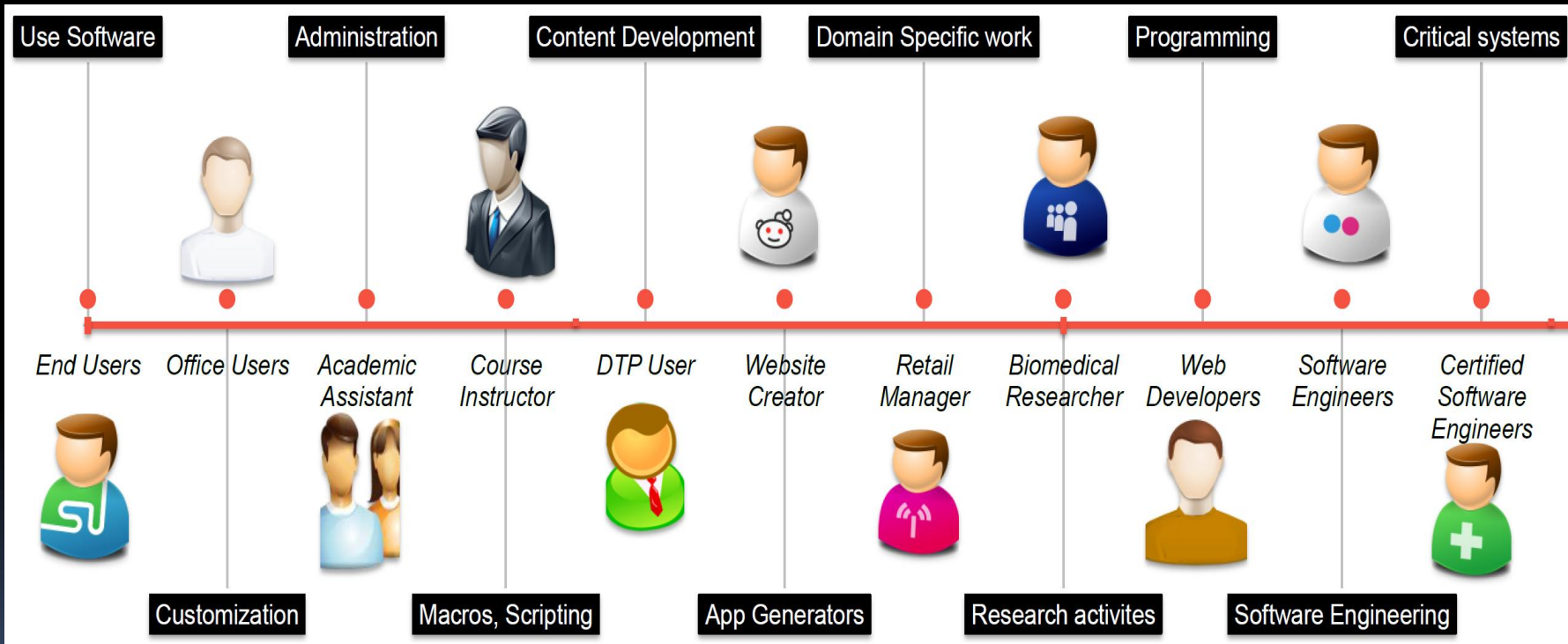
*Software Engineering Research Lab,
IIIT-Hyderabad, India*




Why Teach SE to End Users?


- 90 million end user programmers in US alone by 2012 [Mary Shaw et al.]
- Rapid proliferation of end users performing software engineering activities for their work
- Many end users facing problems with the software (spreadsheets, macros...) they write because of lack of SE knowledge

Diversified Spectrum of End Users





Challenge:
How to motivate & teach
SE to such a diversified
audience?



A Solution:
Apply Adaptive and
Personalized Learning
(APL) to SEE

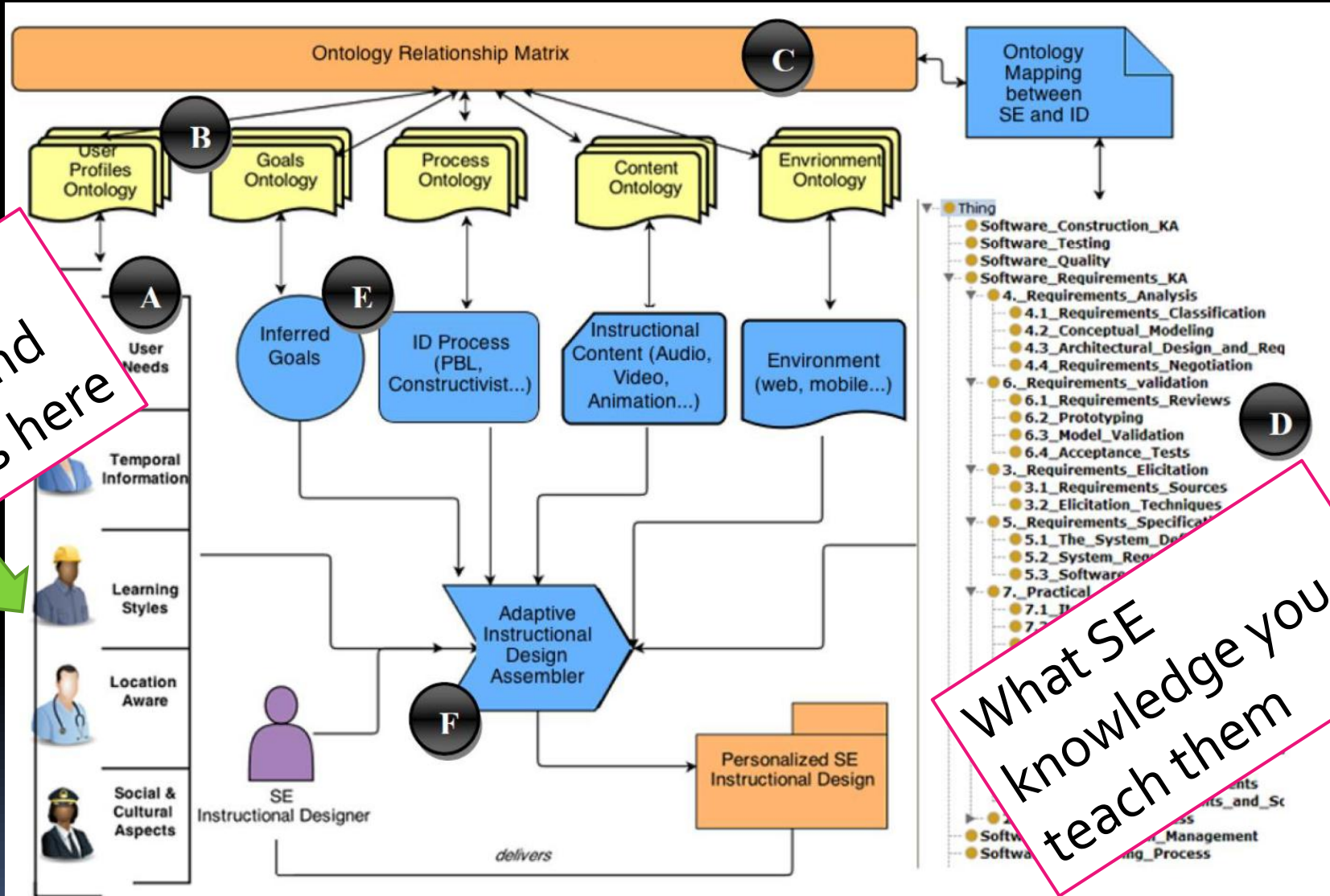


Challenges of Teaching SE to End Users

- End User Concerns
 - No perceived value of SE
 - I have my own problems
 - No SE mindset
- Instructional Design Concerns
 - No direct learning goals for SE
 - Diversified needs and contexts
 - Varied teaching styles, processes
 - Lack of resources and tools

An Ontology Framework

Think of your end users here




What SE knowledge you teach them

Architecture of ontology based framework for integrating SEE and APL
 (A) User Needs (B) Ontologies (C) Ontology Mapping (D) SE Content Ontology (E) Different aspects of ID (F) Dynamic ID assembler



Core Idea

- Gather metadata about learners (styles, preferences...)
 - Customize your learning goals, process and content for them
 - Use ontologies for both of the steps
- 




What Next?

- Read our paper and apply the framework to teach “your end users” “the SE knowledge they require”
- Example
 - Teach spreadsheet programming to teachers who use spreadsheets
 - Teach configuration management to course instructors



Let's Collaborate

- Contact Me:
 - Sridhar Chimalakonda
sridhar_ch@research.iiit.ac.in
 - LinkedIn, Facebook
- 



Join Me!!!

Bridge the gap between the three worlds
sridhar_ch@research.iiit.ac.in



Questions?



Thank You