



# EURO-NOTES 2008

*Working Group 4*

## Triangulation and stability

*Co-Chairpersons*

W. Breithaupt (Germany)

A. Meining (Germany)



# Participants

- Gastroenterologists: 2
- Surgeons: 14
- Industry: 6
- Experience with flexible endoscopy: 8
- Experience in NOTES: 10 (no human procedures)



# Background

- Flexible endoscopes: no stability, but are needed for access and procedures
- Rigid devices: problems with access, but needed for power transmission
- Surgical standards are mandatory



# Flexible Surgery is the aim!

⇒ Multi-bending-endoscopes with variable stiffness and multiple arms and adequate illumination

## Problems:

- limited steerability
- regular endoscopic instrument not usable
- regular endoscopes not usable for platforms
- Costs

Therapeutic endoscopes: who will use them?  
How many examiners? Change of instruments? Suction? Insufflation?  
Flushing? Lens cleaning? Illumination?



# To Dos / Solutions

- Modify current techniques, start with completely new devices, mix it/ use both (=> industry)
- Take advantage of innovations for current practice and make them more available (intraluminal flexible procedures)
- Robotics via single-port-access?
- Magnets/ wireless devices?