

24시간이 모자라

미래자동차공학과
2013009212 김상혁
2012003545 이대식

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팀명 선정 이유

제작할 물건이었던 “시계”에 대해 생각을 하다가 유명한 노래인 '24시간이 모자라'가 주제와도 연관 되고 현재 우리가 처한 상황과도 비슷한 것 같아 정하게 되었습니다.

팀원

2013009212 김상혁

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제작 목표 및 선정 조건

제작 목표

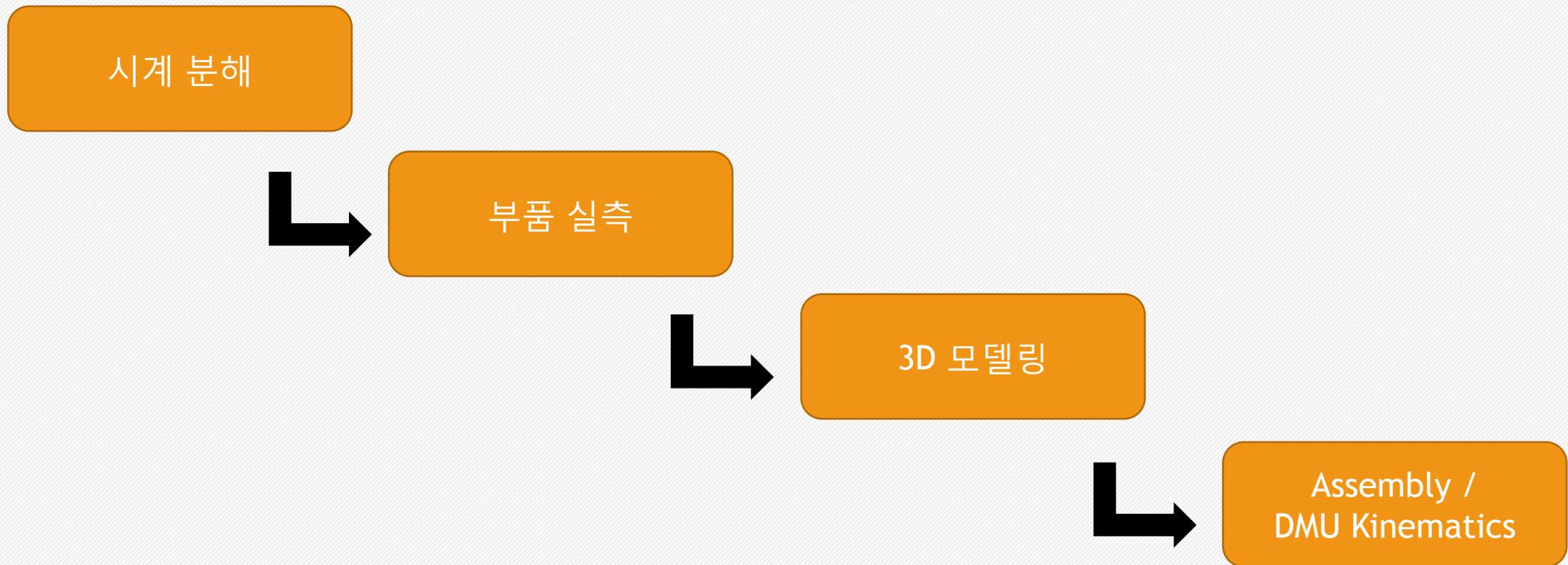


제작 목표 및 선정 조건

선정 조건

- 직접 물체의 크기를 측정할 수 있는 물건
- 내부 Mechanism을 이해할 수 있고 이를 직접 확인할 수 있는 물건
- 주위 생활에서 많이 볼 수 있는 물건

제작 순서



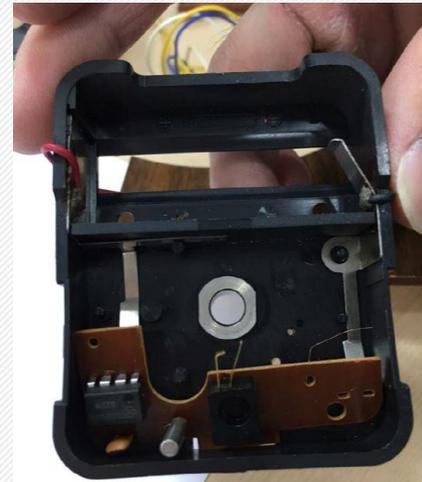
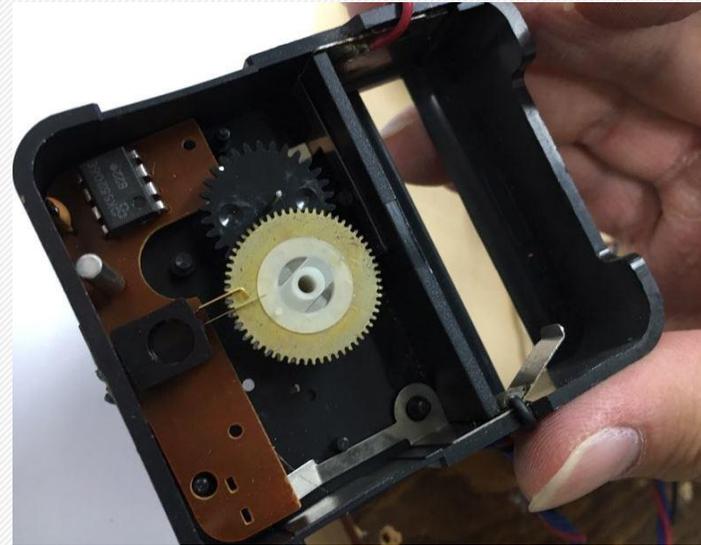
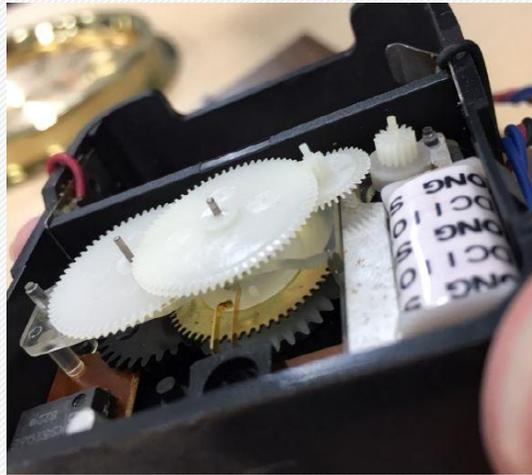
“시계분해”

- 제작과정 Part 1

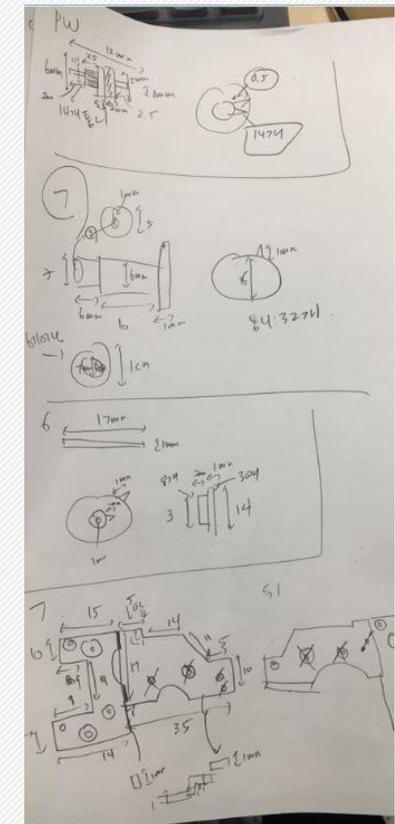
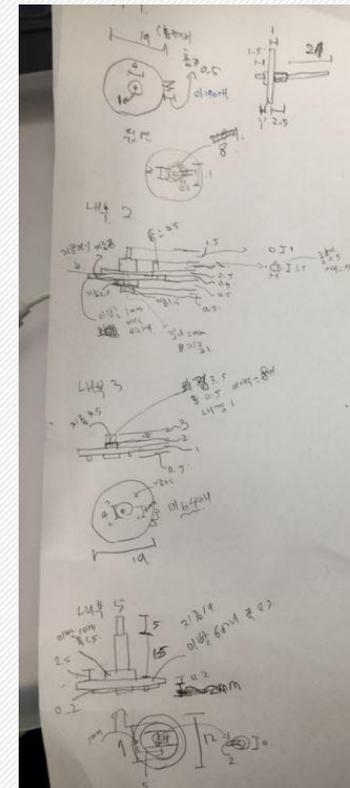
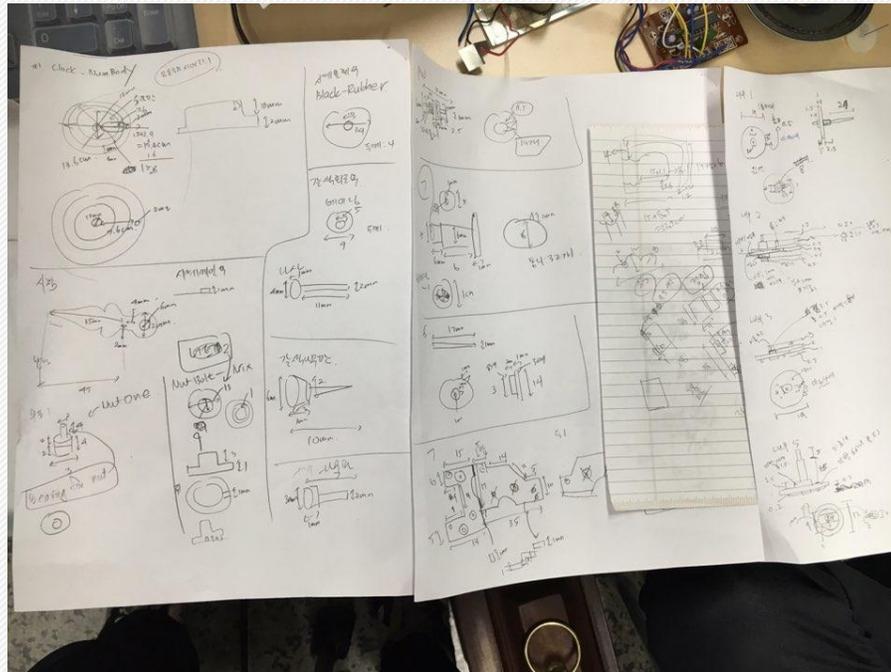
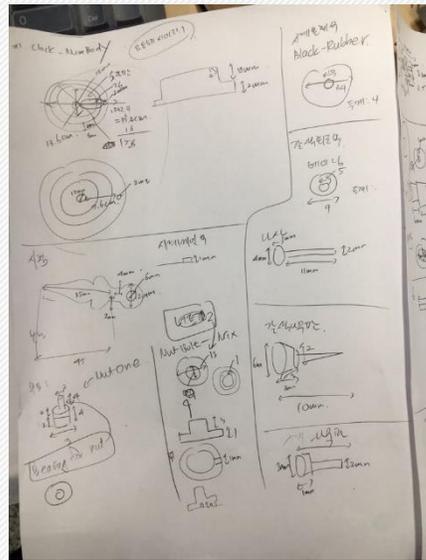


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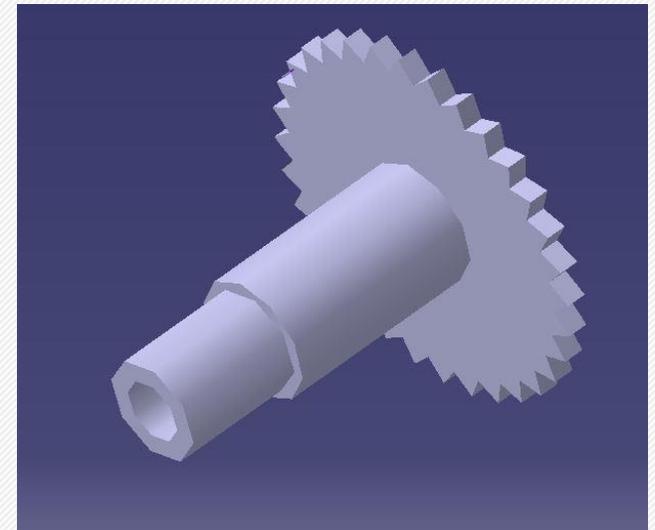
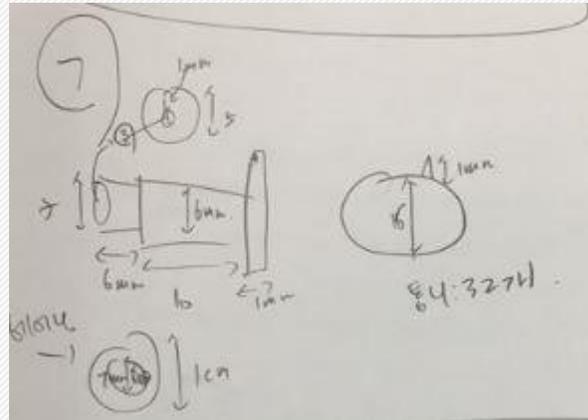
- 제작과정 Part 1



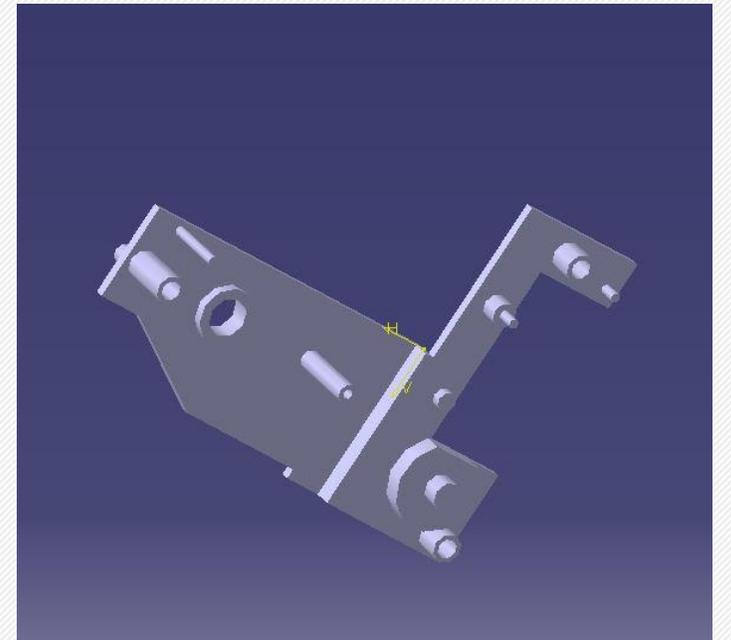
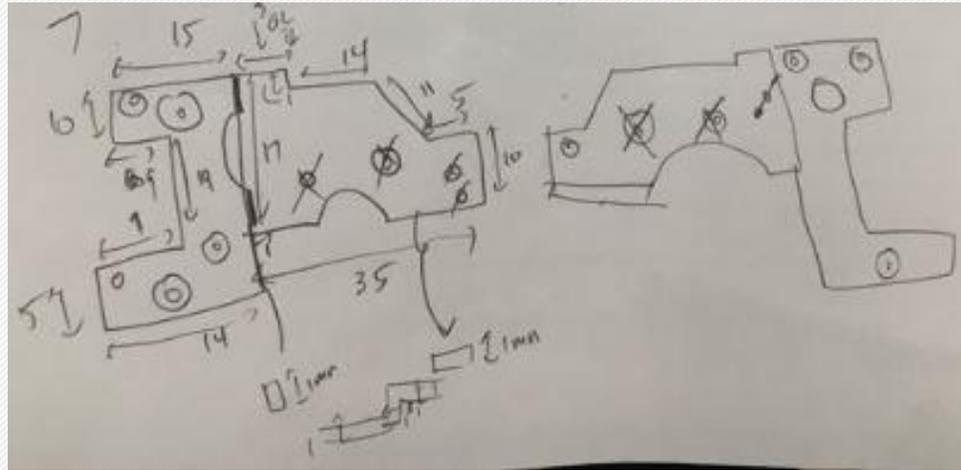
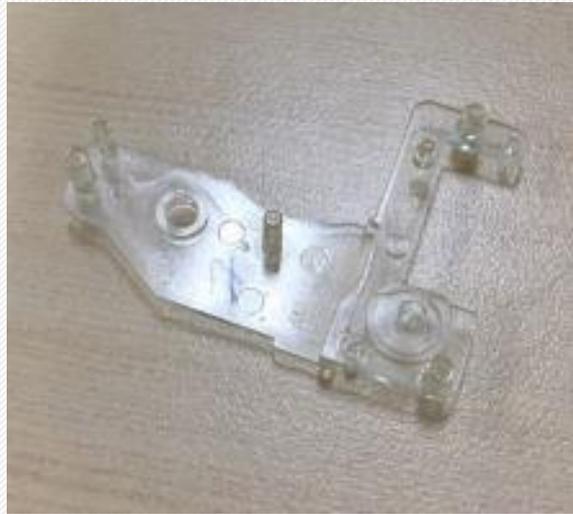
“부품 실측” - 제작과정 Part 2



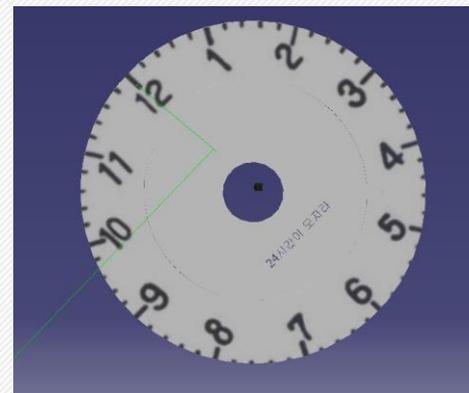
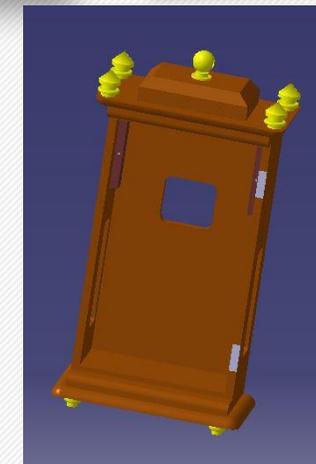
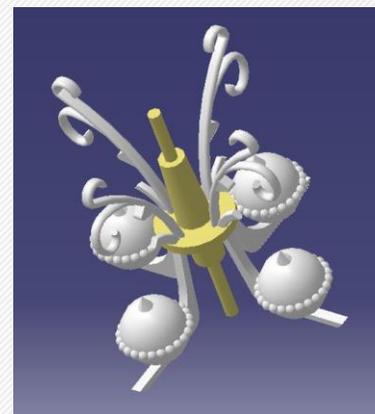
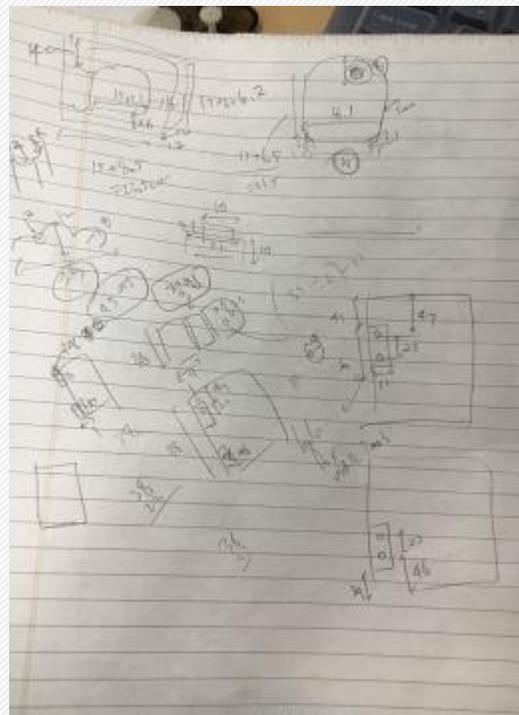
“3D 모델링” - 제작과정 Part 3



“3D 모델링” - 제작과정 Part 3

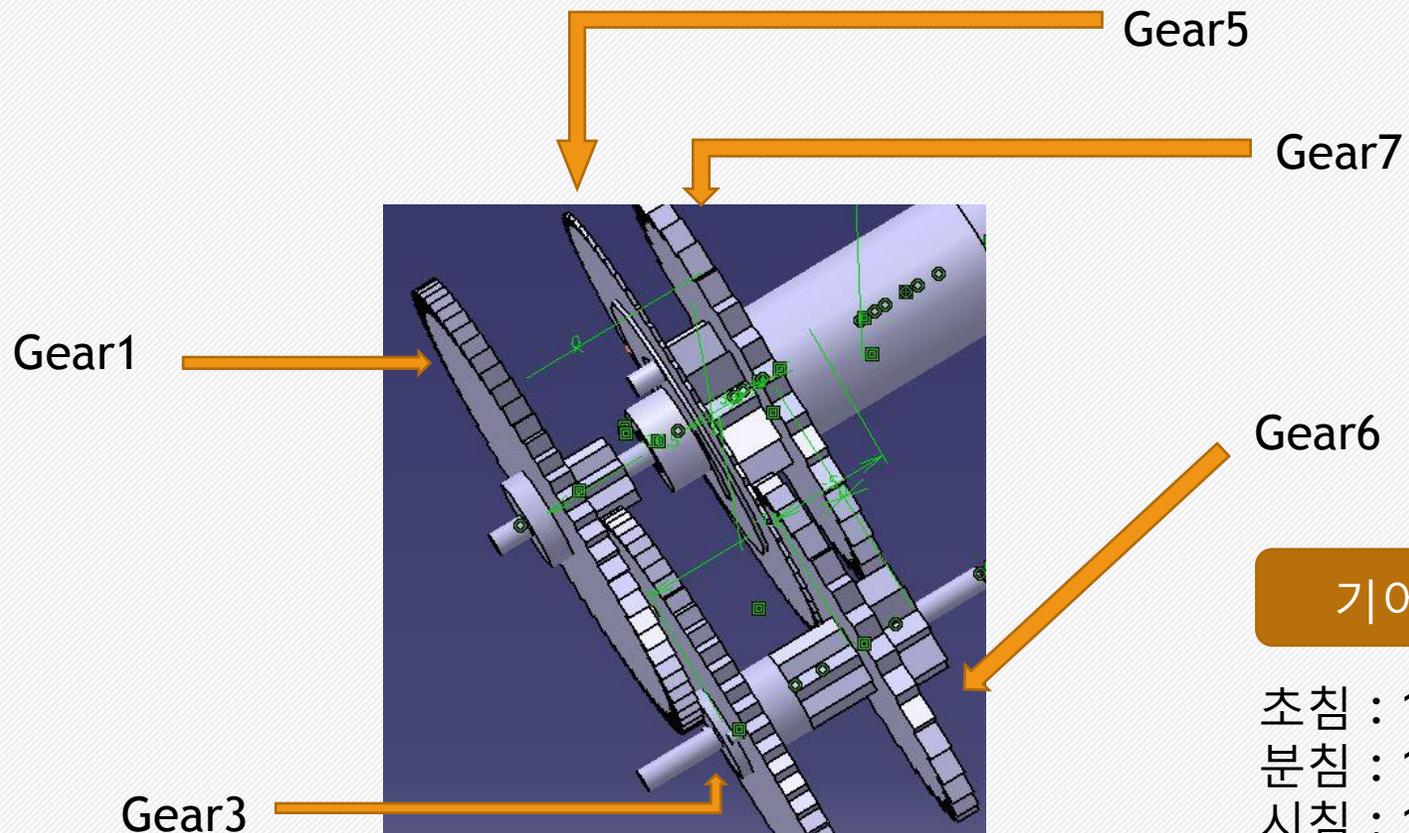


“3D 모델링” - 제작과정 Part 3



“기어비”

- Assembly / DMU Kinematics



기어 간 관계

Gear1-Gear3 : 8/64

Gear3-Gear5 : 8/60

Gear5-Gear6 : 1/30

Gear6-Gear7 : 8/32

기어비 확인

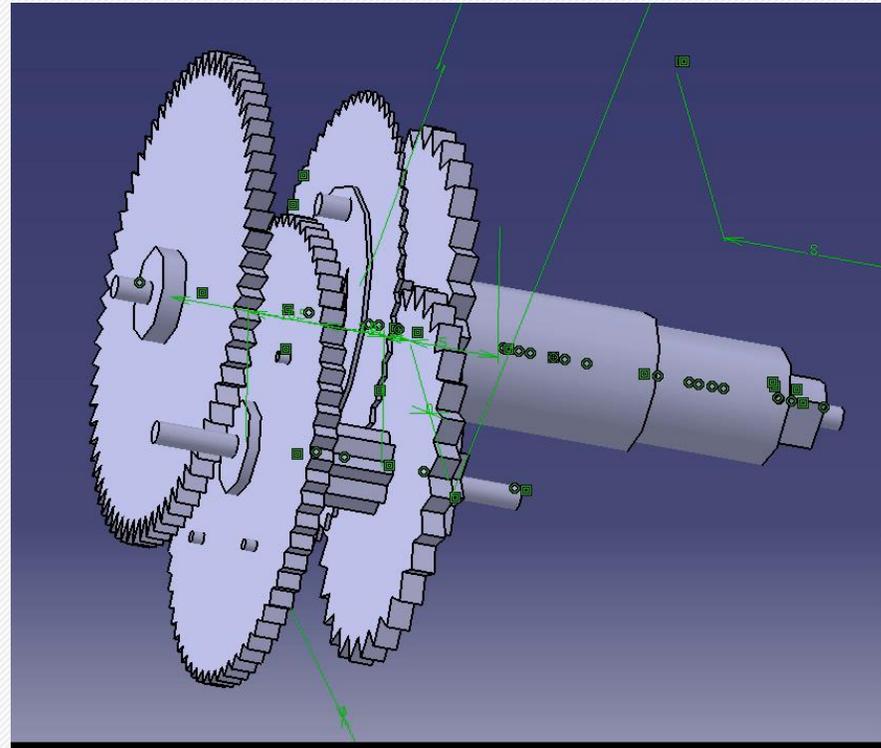
초침 : 1 -> 360°

분침 : $1 \times 8/64 \times 8/60 = 1/60$ -> 6°

시침 : $1/60 \times 10/30 \times 8/32 = 1/12 \times 1/60$ -> 0.5°

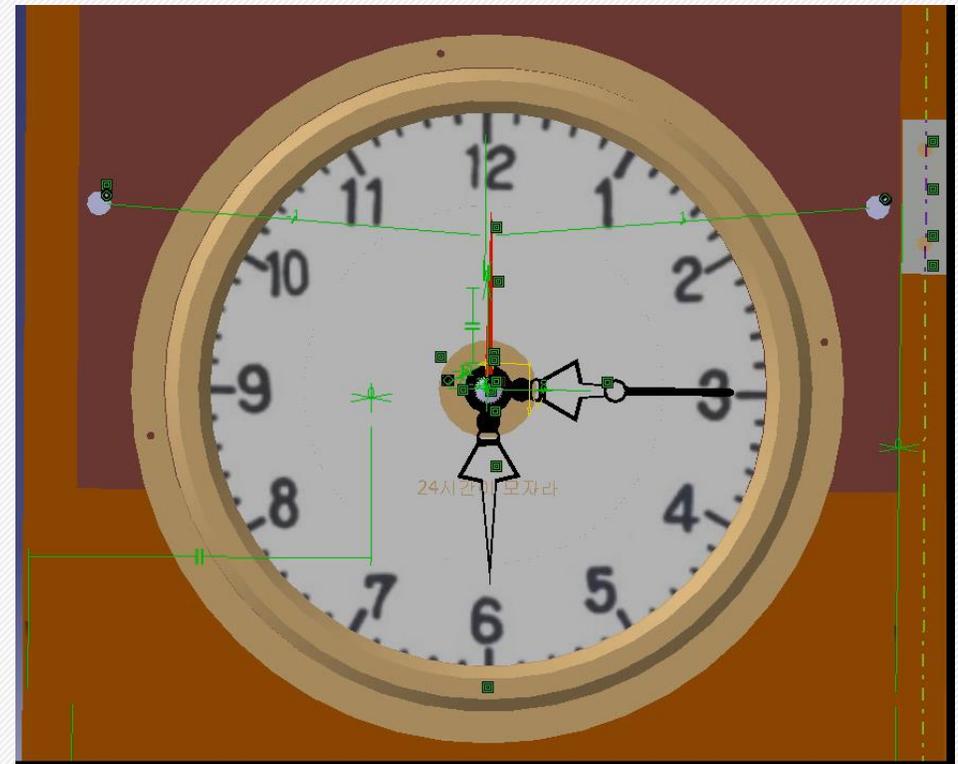
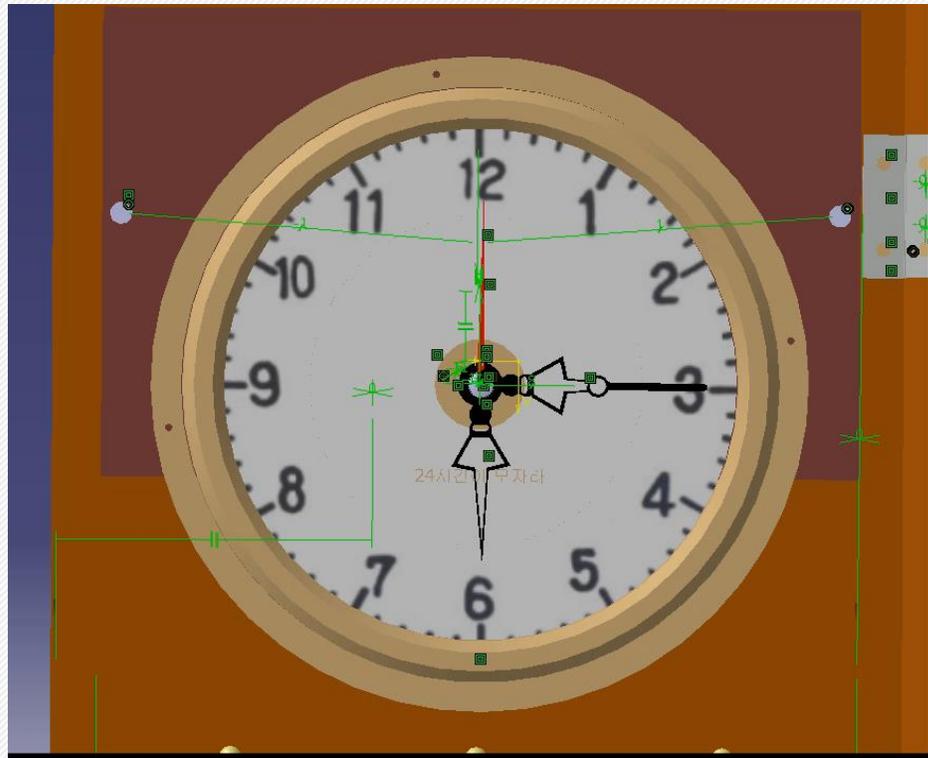
“기어비”

- Assembly / DMU Kinematics



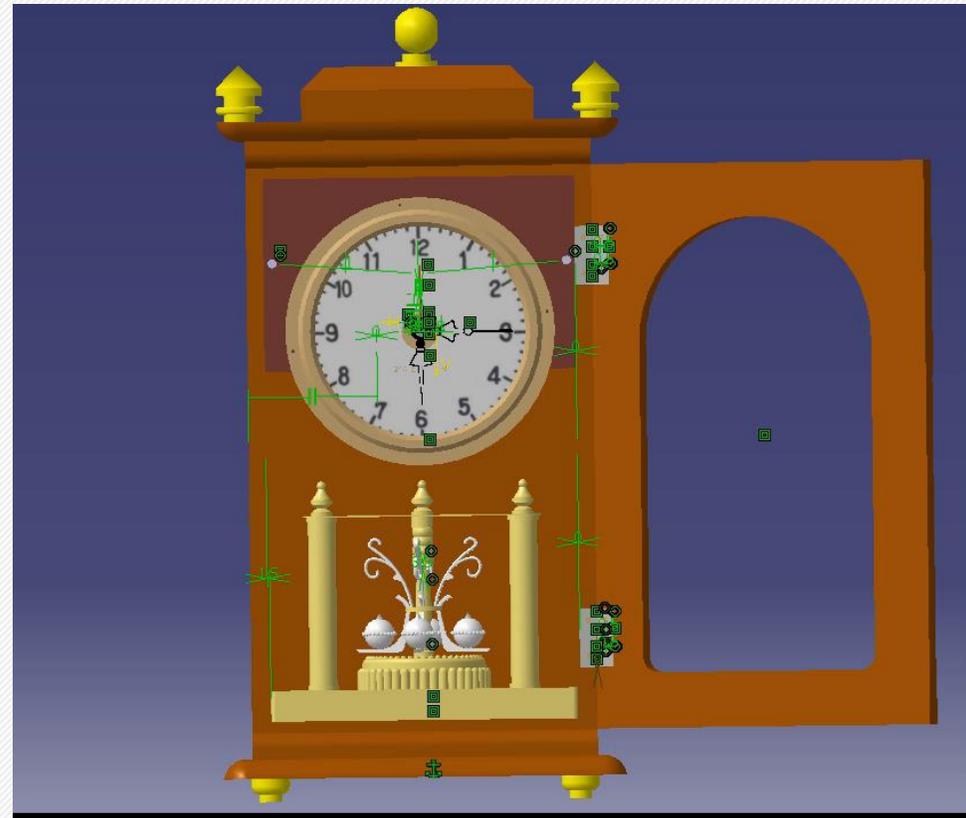
결과

- 시계부분 운전 동영상



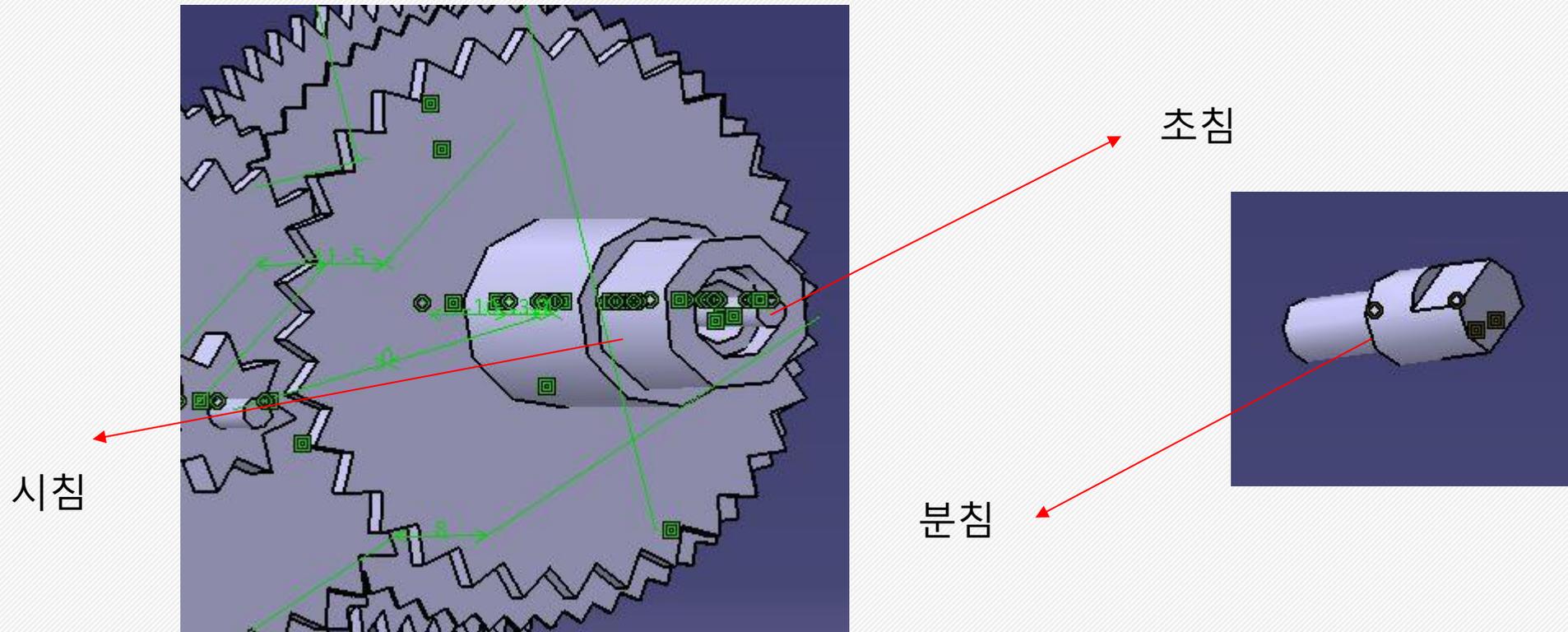
결과

- 전체 동영상



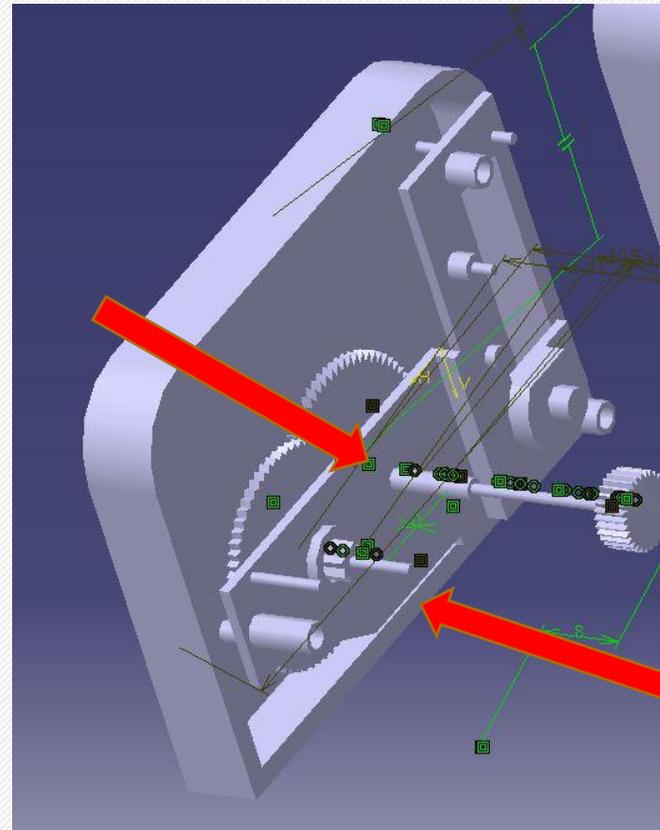
“시침, 분침, 초침”

제작 중 어려웠던 점 및 해결 방안

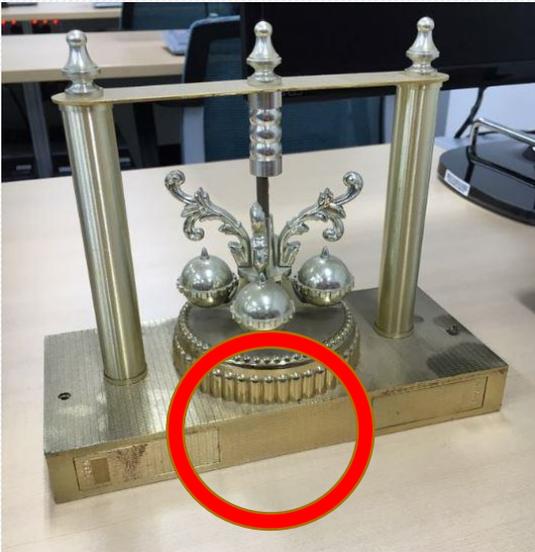


“파트간 오차 발생”

제작 중 어려웠던 점 및 해결 방안



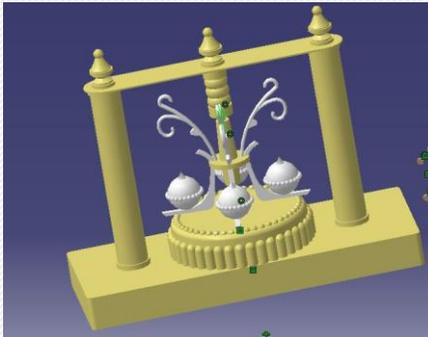
제작 중 아쉬웠던 점

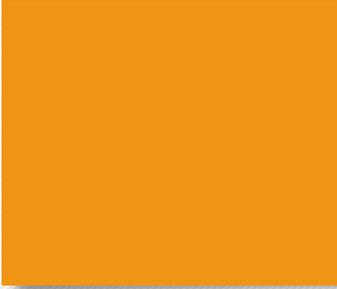


자석의 움직임으로 회전하는 부분

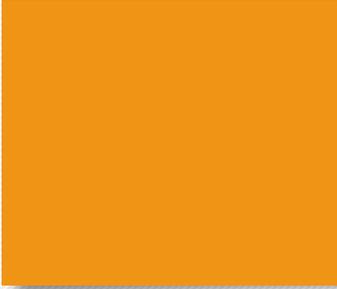


자석을 통한 움직임을
구현할 수 있는 지식 부족

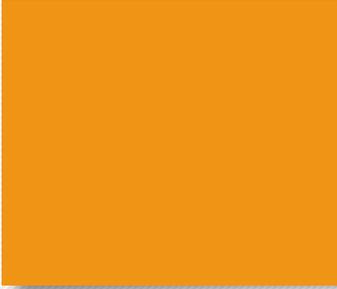




Team Project를 마무리 하며



Q & A



FIN

감사합니다