CueFors 2.5.2

1   Content of CueFors 2.5

1.1   Applications

The main new functionality of this release is six new applications (mystic garden, snap shots, beach stones, plank walk, fruit catch, musical motivator, and two improved applications (auditory cueing & Stroop test). A full description of these applications can be found in the C-Mill Therapy Guideline.

1.2   Bug fixes and general improvements

Other improvements include several bugfixes and performance enhancements. The bug fixes that you will notice most are:

- Positive scores can now be assigned to the animals in a track (fox, bunny, owl, skunk, squirrel);
- Added We-Move to default tracks;
- Paddle reaching the side of the screen;
- Replacing text with icons;

1.3   Updated default protocol list

CF2.5 contains new 'Default protocols', including protocols that are build-up of the eight new applications. Furthermore, we updated the names and content of the default protocols that are available in prior software versions. This means that these 'old' default protocols will be replaced by the new ones! **The 'old' default protocols are backed up and can still be imported to your private or shared protocols in CueFors to be used. Your private and shared protocols will not be deleted and are still available.**

The table below provides an overview of the default protocols in CueFors 2.5 versus the default protocols in CueFors 2.4. Completely new therapeutic goals and protocols are indicated in purple and Italic font ([*Name*]).

*Note with regards to the duration of certain assessments: this is the maximum duration and should be enough to perform the assessment. It is not required to play the application for the full duration.

Default Protocols 2.5 vs 2.4					
Category	**Therapeutic goal**	**Protocol name 2.5**	**Duration (min)***	**Protocol name 2.4**	**Duration (min)***
STAND	Assess static balance with front feedback	Assessment Postural stability	15	Assessment Postural stability	15
	Assess dynamic balance with front feedback	Assessment Limit of stability	15	Assessment Limit of stability	15

	Assess dual task performance while standing with front feedback	*Assessment Stroop*	*15*		
	Improve weight distribution with front feedback	Symmetry	10	Symmetry	5
	Improve weight shifting with front feedback	Arkanoid Soccer Catch *Fruit Catch*	10	Arkanoid Soccer Catch	5
	All STAND training applications are also available combined in one protocol: "all front apps"		10		
STEP	Improve single leg stance with front feedback	Traffic jam	10	Traffic jam	5
	Improve stepping sideways with front feedback	Arkanoid Soccer Catch *Fruit Catch*	10	Arkanoid Soccer Catch	5
	All STEP training applications are also available combined in one protocol: "all front apps"		10		
WALK	Assessment of the walking pattern	Assessment Gait	2	Assessment Gait	5
	Observation of gait adaptability	Removed (Gait adaptation training protocol can be used)		Assessment Gait adaptability	3:18
	Assess dual task performance while walking	*Assessment Stroop*	*15:30*		
	Improve step length, step symmetry and step width with floor feedback	Stepping stones	10	Stepping stones	5:30
	Improve step length and stance time with front feedback	Nature Island *(Symmetry Walk is removed, because for majority not useful to look at max weight assumption on each leg while walking)*	10	Nature Island Symmetry Walk	5:30

	Improve stance phase duration for the left leg by stepping over an obstacle with the right leg	Removed *(similar to obstacles protocol)*		Stance phase ability left	3:01
	Improve stance phase duration for the right leg by stepping over an obstacle with the left leg	Removed *(similar to obstacles protocol)*		Stance phase ability right	3:01
WALK	*Improve step length, step symmetry and step width with floor and front (combined) feedback*	*Beach Stones*	*10*		
	Improve gait adaptability or stance phase duration by avoiding or stepping over obstacles on the floor	Obstacles	7:26	Obstacle avoidance	3:01
	Improve gait adaptability by obstacle avoidance with front feedback	Italian Alps	10	Italian Alps	5:30
	Improve reactive gait with random stepping stones and obstacle avoidance with floor feedback	Reactive Stones *(combination of random ss and re-active obstacles)*	6:58	Random stepping stones and Reactive obstacles	5:30 and 2:28
	Improve speed adaptation with floor feedback	Speed adjustment	10	Speed adaptation	5:30
	Improve gait stability and decrease step width with floor feedback	Tandem	10	Tandem & slalom	5:30
	Improve gait stability and cross stepping with floor feedback	Slalom	10	Tandem & slalom	5:30
	Improve gait stability and decrease step width with floor and front feedback	*Plank walk*	*10*		
	Improve gait stability with front feedback	Arkanoid, Soccer & Catch combined in 'All front apps'	16	Arkanoid Walk Soccer Walk Catch Walk (as separate protocols)	5:30

WALK	Improve gait adaptability with floor feedback	Gait adaptation Easy Medium Hard All tracks Easy Medium Hard Monster game *(In CF 2.5 tracks are combined in one protocol)*	varying	Gait adaptability easy Gait adaptability medium Gait adaptability hard Track Beach Easy Medium Hard Track Balls Easy Medium Hard Track Forest Easy Medium Hard Track Easy Medium Hard Track Animals Easy Hard Track Monster Factory *(In CF 2.4 there is a separate protocol for each track)*	varying
	Improve gait adaptability while performing a dual task with floor and front (combined) feedback	*Mystic Garden*	*10*		
	Improve speed adaptation while performing a dual task with floor and front (combined) feedback	*Snapshots*	*10*		
	Improve step length and step symmetry with auditive feedback	*Musical Motivator Auditory Cueing*	*10*		
	All WALK training applications of the same type are also available combined in one protocol: "all belt apps", "all front apps for weight shifting", "all combined apps" and "all auditory apps".		varying		

2   Disclaimer

2.1   Windows 7

Windows 7 systems cannot play all the new applications and will have the following new applications available: Fruit catch, Musical motivator, Auditory Cueing and Stroop test. The following applications

are not available: Mystic garden, Snapshots, Beach stones and Plank walk. The graphic performance of Windows 7 systems does not meet the requirements of these applications. For Windows 10 systems all applications are available.

2.2   Playing front and belt applications simultaneously

Under manual control it was possible to play a front and belt application simultaneously and this could potentially be used to offer the patient dual task training. For example, Stepping Stones in combination with the Stroop assessment or Obstacle avoidance in combination with Italian alps was used. This will not possible anymore in CF 2.5. However, the new applications Mystic garden, Snapshots, Beach stones and Plank walk replace the option of using front display and belt together. **These applications stimulate patients to look up and see ahead what will appear on the belt, and they also contain a cognitive dual tasking component**. **Another advantage of these 'combined apps' is that results can be shown and analysed together. These new 'combined apps' are only possible with Windows 10,** see point 2.1 above.

2.3   Hardware requirements

If a system does not meet the requirements, the hardware needs to be upgraded. The support department can assist accordingly.