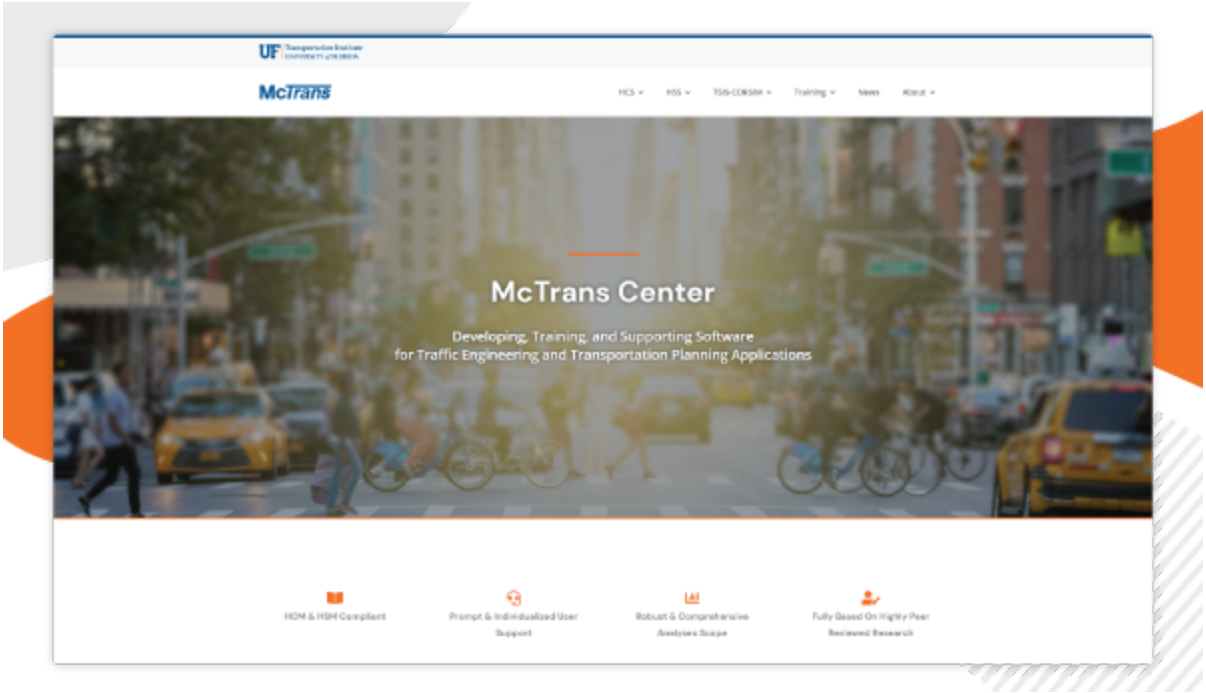
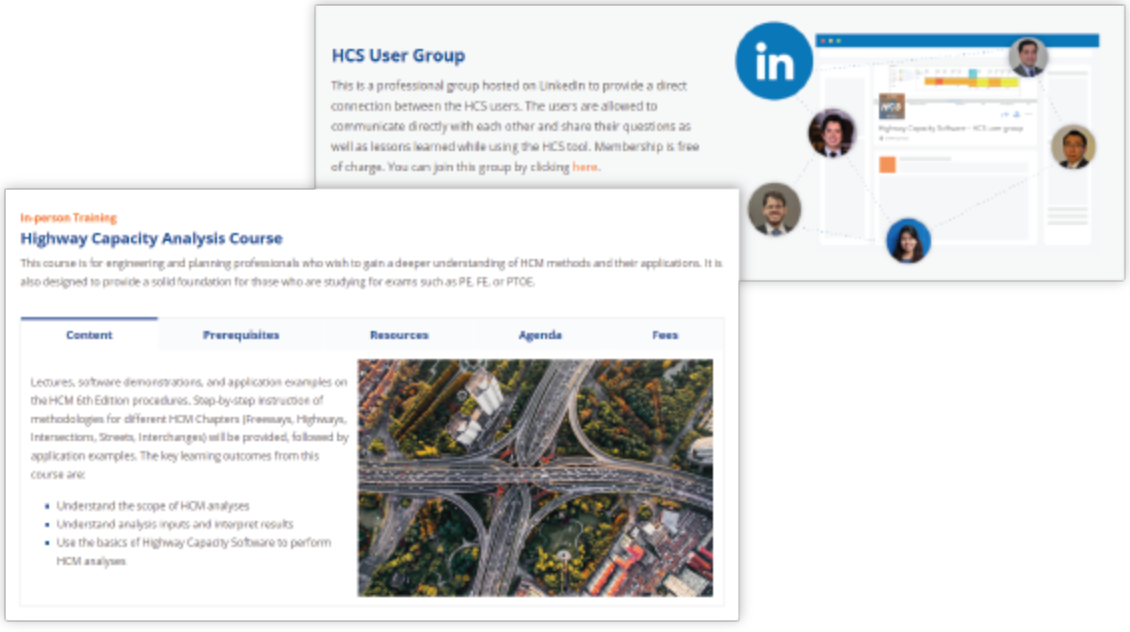
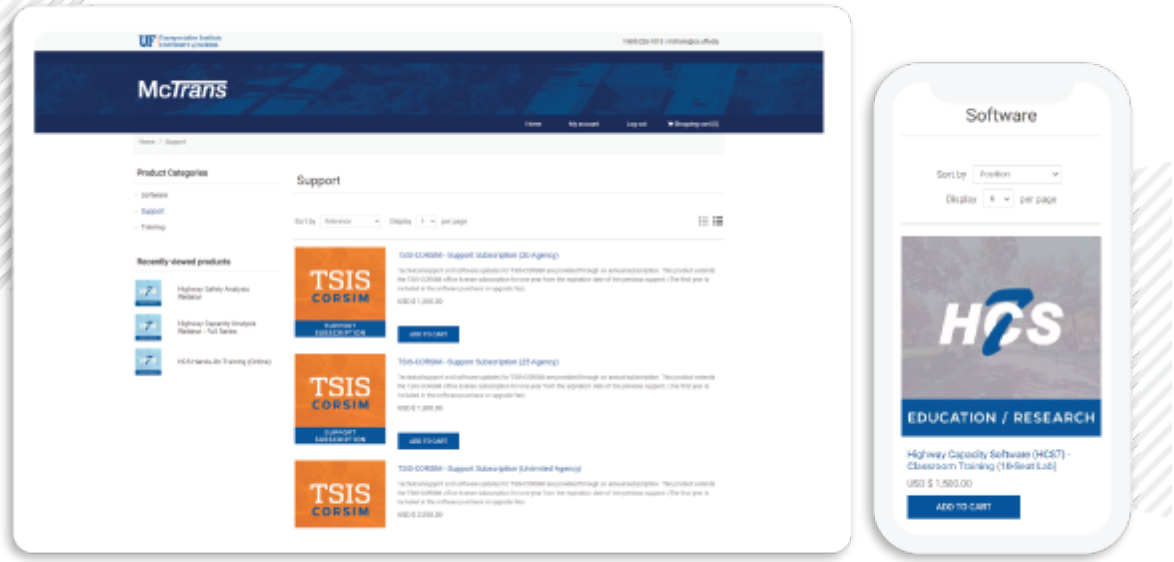


Check Out Our New Website and Store!

We are very excited to announce the launch of our newly designed website and store. After several months of hard work and dedication, we are delighted to officially announce the launch of both. With a cleaner design, our website has become much easier to navigate. Our goal is to provide our visitors a simpler way to learn about the McTrans Center, along with finding up-to-date information on our products and team.



The website design has dedicated pages to showcase our core products—HCS, HSS, TSIS-CORSIM, and Training. To expand on each of the software products, we provide resources through our new Knowledge Base pages. Amongst the new resources are our LinkedIn user groups. With a stronger presence in social media, we hope to foster improved communication with clients, dissemination of technical content, and help connect users to share knowledge. Our training pages are organized to clarify what to expect from each course.



Our new store has also been updated to a more user-friendly format. Customers can easily browse and purchase products, as well as update any customer information or access/download software product.

Welcome Mitch D'Arrigo!

The McTrans Center welcomes Mitch D'Arrigo to our team as a Marketing and Communications Specialist.

Born in Rome, Italy, D'Arrigo has obtained a Masters of Arts degree in Mass Communications at the University of Florida in 2019 and worked for the local non-profit Keep Alachua County Beautiful. Mitch is thrilled to be back to UF: "UF is my home, and I am excited to still be a part of it and make a positive impact."

Besides his Communications background, Mitch was a 15-time all-American swimmer for the UF swim team. He swam for Italy at the 2016 Rio Olympic Games and was a USA National Swim Team Member for the 2017-2020 seasons.

At McTrans, D'Arrigo will coordinate efforts to update and manage social media profiles and how McTrans presents itself in the digital world.

Mitch D'Arrigo at the 2016 Olympic Games Rio, Brazil

TIPS & HINTS

Copying and Pasting the HCS Formatted Report to Excel?

Users can copy selected table data on HCS modules formatted report and paste it directly to Excel, allowing for in-house customization of reports, by using the standard MS Windows **CTRL+C** and **CTRL+V** keys.

In the example shown below, signal timing results are copied over a preformatted spreadsheet which automatically generates additional graphs.

Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

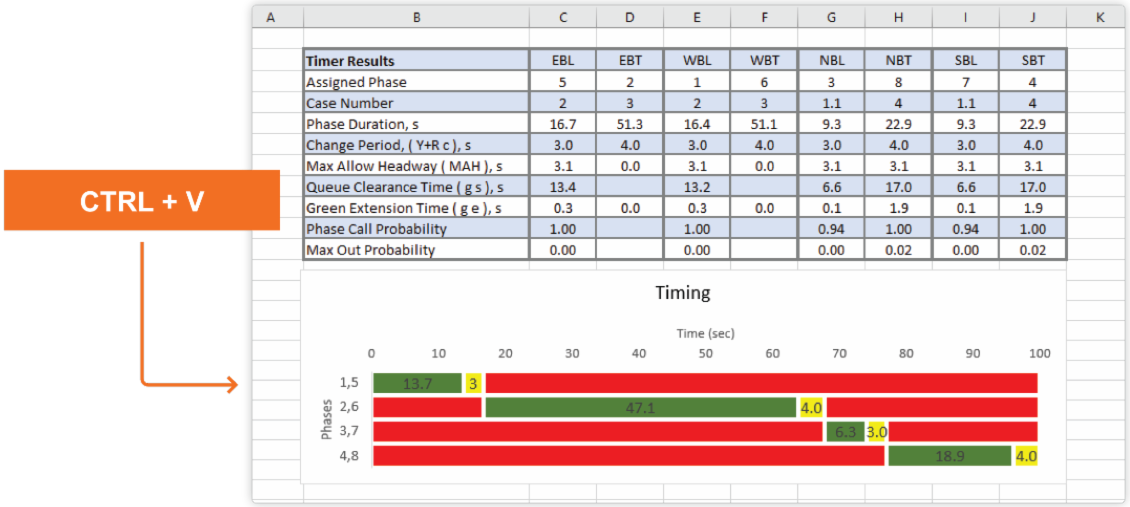
Green	13.4	0.2	47.1	6.3	18.9	0.0	
Yellow	3.0	0.0	4.0	3.0	4.0	0.0	
Red	0.0	0.0	0.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	16.7	51.3	16.4	51.1	9.3	22.9	9.3	22.9
Change Period, (Y+R $_c$), s	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time (g_s), s	13.4		13.2		6.6	17.0	6.6	17.0
Green Extension Time (g_e), s	0.3	0.0	0.3	0.0	0.1	1.9	0.1	1.9
Phase Call Probability	1.00		1.00		0.94	1.00	0.94	1.00
Max Out Probability	0.00		0.00		0.00	0.02	0.00	0.02

CTRL + C

CTRL + V

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2	3	2	3	1.1	4	1.1	4
Phase Duration, s	16.7	51.3	16.4	51.1	9.3	22.9	9.3	22.9
Change Period, (Y+R c), s	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time (g s), s	13.4		13.2		6.6	17.0	6.6	17.0
Green Extension Time (g e), s	0.3	0.0	0.3	0.0	0.1	1.9	0.1	1.9
Phase Call Probability	1.00		1.00		0.94	1.00	0.94	1.00
Max Out Probability	0.00		0.00		0.00	0.02	0.00	0.02



STAFF SPOTLIGHT

Guoqian Yan

Software Developer

Before I worked full time at the McTrans Center, I worked here as a student assistant when I studied Computer Science and Geographic Information Science (GIS) at the University of Florida. I took part in designing and developing a transportation web application. My major task was to build map visualization and intelligence using JavaScript and Google Maps Platform. The aim was to help users not only to intuitively see the area of interest on the map but also to obtain some required geometric information directly from the map. I was impressed by the effective communication and close cooperation among the team during my work.

I am glad to return working here as an Application Developer Analyst. Even though I started to work remotely due to the COVID-19 pandemic, I luckily got used to my daily work smoothly under the help of the director, my supervisor, and my colleagues. During the past 7 months of my employment, I worked on several software including HCS and HSS. One of my favorite aspects about working at McTrans is learning new knowledge about transportation engineering every day. With the widespread applications of GIS in transportation, such as highway maintenance and management, traffic simulation, accident analysis, and route planning, I am excited to apply my GIS background knowledge and programming skills to the transportation area as a productive member of the McTrans Center.

The Effects of TWLTL on Urban Streets Segments in HCS

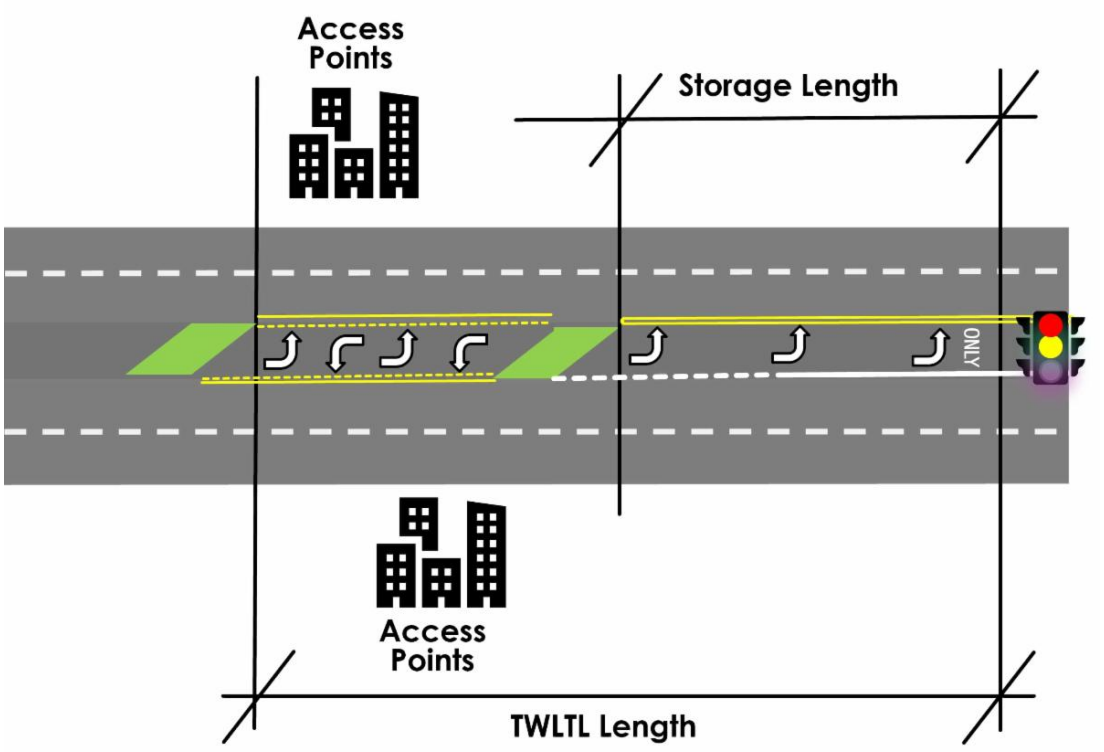
Dr. Gustavo de Andrade

A Two-Way Left-Turn Lane (TWLTL) is a common design configuration where one central lane allows left-turns from both directions of the main road to local driveways. While this lane configuration can provide much-needed accessibility to local development, how can the traffic analyst incorporate the effects of this design choice on the urban street segments level of service analysis using the HCM methodology and the HCS?

The HCM does have recommendations on what should the analyst look at when considering the effect of TWLTL on urban streets segments. The next subsection describes two types of effects of TWLTL and how to incorporate them into the HCS analysis

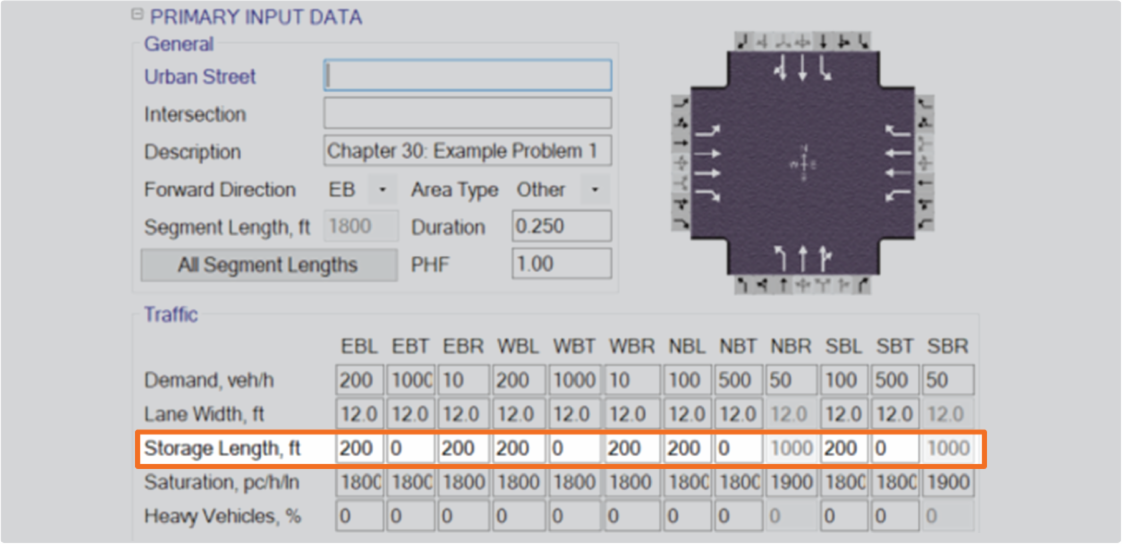
1. Storage Length Effect

If a Two-Way Left-Turn Lane is provided for left-turn vehicle storage and adjacent access points exist, HCM6 (page 18-18) alerts the user that the left-turn storage length (bay length) should represent the effective storage length available to the left-turn movement, which needs to be defined case by case depending on the field or design specifications. In the example below, the actual eastbound left-turn storage length is shorter than the total TWLTL, as a stretch of the central lane design contains channelization which favors the access to local development but prevents its use for the storage of EBL turning vehicles.



Measuring the Left-Turn Storage Lengths on a segment with a TWLTL

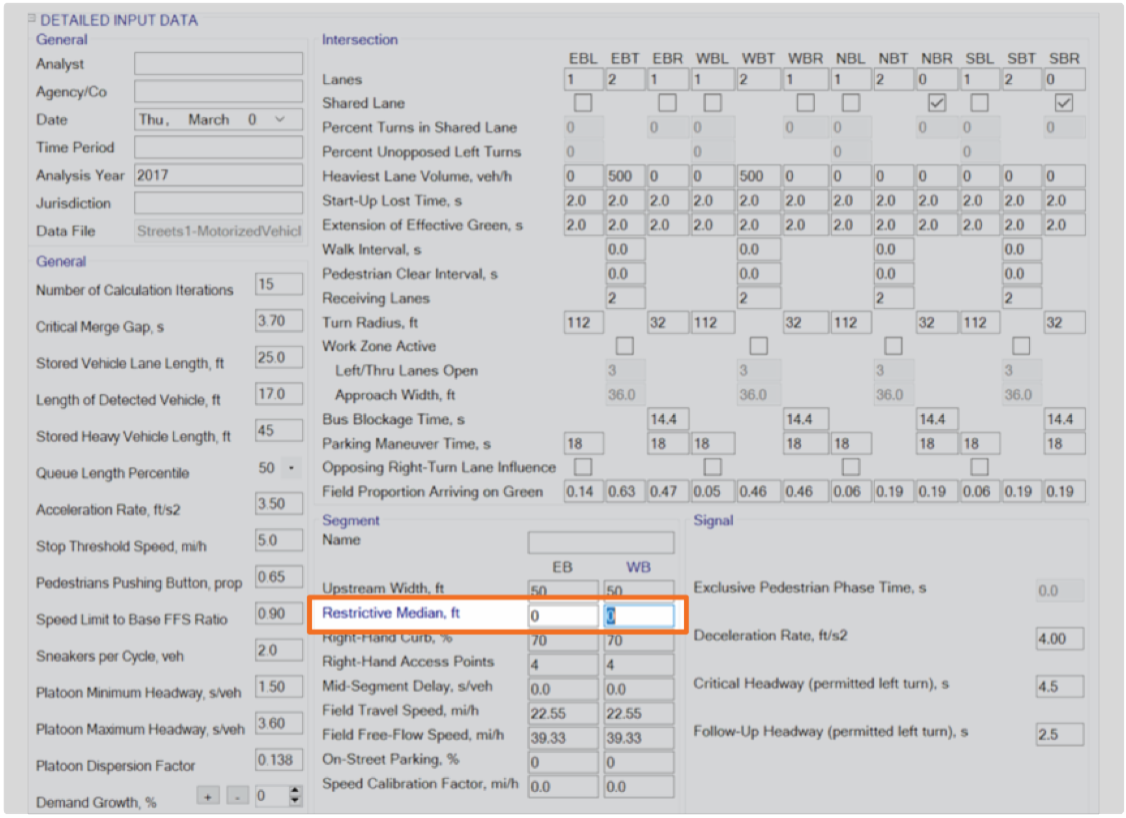
On HCS Streets, the storage lengths for all movements, including left-turns, are found on the main input screen, under the demand and lane width information (see picture).



	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Demand, veh/h	200	1000	10	200	1000	10	100	500	50	100	500	50
Lane Width, ft	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Storage Length, ft	200	0	200	200	0	200	200	0	1000	200	0	1000
Saturation, pc/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1900	1800	1800	1900
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0

2. Median Type

The median type on an urban street affects the free flow speed estimation of the segment, and is categorized as “undivided” or “divided.” A divided median can be restrictive (raised curb, islands, or barriers) or nonrestrictive, including the TWLTL design (HCM6, page 18-60). Each affects the FFS results differently, with TWLTL having little effect on FFS. On HCS Streets, the median type input is found under the Detailed Input data section of the user interface. It is defined on the software as the length of the median which is restrictive, in % of the total segment length. For a TWLTL, this normally should be set as zero, unless the TWLTL contains islands, in which case the length of all islands and raised curbs should be added and inputted in this field.



Restrictive Median Input on HCS Streets

Upcoming Training Webinars

Highway Capacity Analysis Webinars

18 PDHs provided for each series.

Sep 13 - 17 1 - 5 PM ET

Highway Safety Analysis Webinars

8 PDHs provided for each series

Sep 21 - 22 1 - 5 PM ET

HCS Hands-On Training

8 PDHs provided for each series

Aug 30 - 31 1 - 5 PM ET

Ready to Register?

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